

PRICE COMPETITION IN THE CANADIAN SECURITIES INDUSTRY: A  
TEST CASE OF DEREGULATION

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by John D. Todd

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## CONTENTS

Preface v

1

Introduction 1

2

The Canadian Securities Industry 5

3

The Evolution of Rate Regulation 24

4

Issues 29

5

Analysis 37

6

The U.S. Experience 65

7

The Implications of Competitive Rates 73

8

Postscript 79

Appendix: The Ontario Securities Commission Decision 81

Tables 98

Figures 123

Notes 129



## PREFACE

On 1 April 1983, competition between brokers on the basis of price ceased to be restricted for securities trades executed on the Toronto Stock Exchange (TSE). This means that brokers can now compete with each other on the basis of price as well as on the basis of the services they provide. Some brokers predicted that the introduction of competitive rates would result in many firms being driven out of business. Other commentators expected the elimination of fixed rates to be a 'non-event', with nothing dramatic happening. Most anticipated a result between these extremes.

Without a crystal ball, no one can know for certain which prediction is correct. Fortunately, a great deal of information relevant to the matter of fixed commission rates is available to help provide an idea of what can be expected to occur. The Ontario Securities Commission based its decision to eliminate fixed rates on thousands of pages of testimony and submissions. The present study attempts to distil this material, along with the relevant academic literature, statistics on the U.S. experience with competitive rates, and general economic theory, into a single comprehensive analysis. This analysis provides the basis for a likely scenario for the effects of the OSC's decision. The accuracy of this scenario will be learned only as developments in the industry unfold over the next few years; however, the evidence supporting it is quite compelling.

This Discussion Paper is being published soon after the introduction of competitive rates in order to put the pre-unfixing predictions of economic analysis on record before the effects of the change actually reveal themselves. This is done both in the hope that it may be helpful to those who will be adapting to the competitive environment in the next few years and also to take advantage of this event as a 'scientific' test of economic analysis. In defense of the field of economics, however, I must accept full

responsibility for any analytic errors uncovered by the upcoming experiment.

The present study has been written for the non-economist. It draws on my experience with the issue of price regulation over the last five years, first from an academic perspective and later as an expert witness at the OSC hearings. The number of people who have helped me to understand the issues and the industry during this time have been far too many to mention. The preparation of this manuscript, however, would not have been possible without the many hours of assistance from Michael Jones. The text has benefited greatly from the helpful comments of Enid Slack, Douglas Crocker, and an anonymous reviewer. The support, encouragement, and suggestions of David Conklin, Research Director of the OEC, have been invaluable. Gina Langford and Lisa Murray displayed infinite patience while producing several drafts of this manuscript.

## INTRODUCTION

One of the basic lessons of economic analysis is that the regulation of market prices is unlikely to improve the welfare of society, except in a few special circumstances. The primary exception is where the production of goods or services tends naturally to be monopolistically controlled.

Natural monopolies include such services as land-based telecommunications, the distribution of electricity, the distribution of natural gas, and cable television. In each of these cases, a single common network can provide the service more economically than parallel networks, which involve unnecessary duplication of facilities. It would be very inefficient to have several telephone cables controlled by several companies serving a neighbourhood in a competitive fashion. Similarly, it would be inefficient to have several electricity cables, gas mains, or cable television lines serve a neighbourhood competitively. Within a particular geographic area, it is natural that the service should be provided by a single firm; hence, a monopolistic situation arises. Since price competition is not possible in these cases, and since monopolistic producers have the market power and the incentive of higher profits to increase prices above the level required to recover economic costs, it is generally accepted in Canada, and elsewhere, that price regulation is appropriate in these situations.

In non-monopolistic industries, price regulation cannot be justified on the same grounds unless the industry is able to organize itself in such a way that the members can make use of entry and regulatory barriers to act jointly as a virtual monopoly. In these industries, the normal forces of price competition are expected to restrain firms from charging excessively high prices, without the administrative costs and potential economic inefficiencies associated with regulatory activity.

Yet there are a number of Canadian non-monopolistic industries in which prices are regulated. These industries deserve careful examination



to determine why they have been exempted from the normal forces of price competition. Is regulation necessary because price competition fails to keep prices at a level that reflects economic costs? Is price regulation used in order to achieve some particular social objective? If so, is price regulation the most effective and efficient means for achieving that objective? In fact, is price regulation in these industries contrary to the public interest? Does it serve particular interest groups rather than the public at large? If so, should it be eliminated?

This study attempts to answer these questions in the context of the stock brokerage industry - one particular instance of price regulation in a non-monopolistic industry. Although all of the conclusions of the present study cannot be assumed to apply to all regulated non-monopolistic industries, it is hoped that the analytic approach illustrated here will provide some insight into similar situations in other industries.

The brokerage industry in Canada serves as an ideal case study of the more general issue of price regulation in non-monopolistic markets for several reasons. Prices - that is, brokerage commission fees - have not been subject to the normal forces of competition since the very early days of the Toronto Stock Exchange (TSE). However, as a result of recent decisions by the Ontario and Quebec securities commissions, the principle of price competition is now being put to the test in the industry. This circumstance provides a rare opportunity - a chance to compare price-regulated and price-competitive regimes while all other factors remain fairly constant. Events will put the predictions of economic analysis to a real-world test. The 'experiment', already begun, will test the conflicting views of the advocates and critics of deregulation in the stock brokerage industry. The results should provide a useful basis for the evaluation of similar debates in other industries.

The Canadian brokerage industry is also an ideal case study because the issue of price regulation in the industry has been the subject of extensive public debate in recent years. This debate culminated in the 1981 hearing before the Ontario Securities Commission, the Alberta Securities Commission, and the Superintendent of Brokers, British Columbia (with the Quebec Securities Commission as an observer) and a separate hearing before the Quebec Securities Commission. At this point in time, the issues relevant to the decision to 'unfix' brokerage commission fees have been fully aired and all views on the matter should be quite well understood. It is reasonable to assume, consequently, that most of the

important considerations have been addressed.

In addition, due to the regulatory history of the securities industry, a fairly extensive statistical description of its structure is available. Without this data, it would be very difficult to resolve the contradictions inherent in the analytic views of those for and against price competition in the securities industry. Given this data, however, the Ontario and Quebec securities commissions and the Superintendent of Brokers, British Columbia, are all of the view that the effects of unfixing commission rates can be predicted with sufficient confidence to reduce the risks of the unknown to an acceptable level.

The review of the issues may also be helpful to investors and securities dealers, who will now have to adapt to a competitive environment. For the purposes of this paper, it has been necessary to translate the arguments presented by the two sides in the price-competition debate into the terms of economic analysis. It is hoped that this translation preserves the intent of those who initially presented the arguments. The analysis provides the basis for a summary of the expected effects of price competition. While the effects of competition cannot be predicted with certainty, an awareness of the most likely effects may help both investors and securities dealers prepare for the introduction of competitive rates. Possession of such an awareness may help them avoid being left behind by a changing environment. It also may assist them to identify ways to capitalize on new opportunities that can be expected to arise.

In this paper, the issues are addressed from the perspective of Ontario. Much of the discussion and data, therefore, relates specifically to the Toronto Stock Exchange and its regulatory watchdog, the Ontario Securities Commission. Although some information is included on the Canadian industry as a whole, no attempt is made to deal with specific regional differences. However, there is sufficient cross-membership among exchanges, enough similarity in the securities regulation of different provinces, and sufficient access to all exchanges for all Canadians to make it highly unlikely that pricing strategies and services offered by members of different exchanges differ significantly. Consequently, the discussion and major conclusions presented here are, in general, applicable to the Canadian industry as a whole.<sup>1</sup>

The remainder of this study is divided into six chapters. Chapter 2 provides background institutional and statistical information on the stock brokerage industry. Chapter 3 briefly reviews the events that led to the

decision to introduce price competition into the Canadian industry.

Chapter 4 reviews the arguments for and against competitive rates. Chapter 5 analyzes and evaluates these arguments to determine their consistency with the institutional and statistical information outlined in Chapter 2 and with the insights offered by economic analysis.

Chapter 6 summarizes the U.S. experience with competitive rates. The Canadian situation, of course, is somewhat different. Chapter 7 discusses the likely implications of competitive brokerage fees for Canadian investors and the Canadian securities industry. This chapter also offers some conclusions regarding price regulation in non-monopolistic markets generally.

The Canadian securities industry engages in a number of activities, one of which is executing trading on stock exchanges. Since its stock brokerage activities are intimately intertwined with its other activities, it is necessary to have some appreciation of the industry as a whole in order to understand the issues involved in the unfixing (of brokerage commission rates) debate. A number of broad questions are relevant. How important is commission revenue from stock trading? Why have prices been fixed for exchange trading but not for the other services of securities dealers? Does the fact that securities dealers have engaged in a mixture of price-regulated and price-competitive activities affect the practicality of price regulation? Does the mix of activities affect the likely effects of unfixing? To help answer these and other questions, this section describes the Canadian securities industry, putting exchange trading into the context of the industry as a whole.

### The role of the securities industry

The securities industry is the only segment of the Canadian financial community that primarily serves a 'conduit' rather than a 'conversion' function in the financial market.<sup>1</sup> The industry acts purely as a broker, connecting the buyer to the seller and facilitating the direct exchange of money for securities. The exchange as such takes place between savers and borrowers, or between investors buying securities and those selling securities. Even when securities dealers take a position in a security (buy and sell on their own account), it is not in a conversion capacity. They simply hold the security for resale at a later date, either to capitalize on an anticipated price movement or to smooth the 'flow' through the 'conduit'.



Since the securities industry serves strictly as a conduit, it has no direct control over the assets that move through its facilities. Financial institutions that serve a conversion role, such as banks, trust companies, and insurance companies, control all the assets for which they serve as intermediaries. Tables 1 and 2 illustrate this difference. (All tables and figures are collected at the back of the book.) In 1979, Canada's largest financial institutions, the banks, controlled assets of well over \$200 billion dollars. Life insurance companies controlled close to \$40 billion and trust companies close to \$30 billion.<sup>2</sup> The value of listed shares of Canadian exchanges was over \$300 billion, but the only asset directly controlled by the securities industry is its own capital of less than \$1 billion.

The difference between the financial resources of the securities industry and those of other financial institutions was the basis for the TSE's expression of concern during the 1981 OSC hearings that the latter have sufficient market power to extract unreasonably low fees from the brokerage industry in a price-competitive environment.<sup>3</sup> As is shown in Chapter 4, this concern appears to be inconsistent with both existing evidence pertaining to the market power of institutional investors and rational profit-seeking behaviour.

The securities industry deals with a wide variety of investment vehicles. Securities dealers handle primary and secondary distributions of corporate equity and debt instruments (stocks and bonds), government bonds, commodities, futures, and options. Each of these is a distinct activity; however, a significant portion of the costs associated with these activities are common overhead costs.<sup>4</sup> The high proportion of common costs contributes significantly to the OSC's concern that there is no appropriate basis for adequately determining costs for rate-setting purposes.

In the primary market, securities dealers underwrite new issues. Although the lead underwriter may charge the issuing corporation certain fees, the underwriting (and selling) groups are normally compensated primarily by means of a discount on their allocations below the retail price at the equity issue. The underwriters and selling group may also earn a profit or suffer a loss on the sale of the stock, depending on the market response to the new issue and changes in market conditions during the distribution.<sup>5</sup>

The secondary market involves trading between investors. Securities dealers bring together individuals or institutions holding shares they wish



to dispose of and individuals or institutions seeking to purchase those shares. They charge a commission fee for serving as the broker for these trades. As Table 3 indicates, commissions accounted for almost two-thirds of TSE members' total revenue in 1980. The annual figure varies with trading activity, but brokerage commissions are consistently the bread and butter of the industry.

Secondary trading is important because investors must be able to liquidate their holdings in order to realize their capital gains or disinvest in the stock market. The liquidity of an investment is important to the investor's willingness to invest in the first place; by providing this liquidity, and thus making equity investment more attractive, the stock exchange reduces the cost of capital of business enterprises.

Because commission revenue from equity trading is the major source of industry income, the industry has warned that a sudden decline in commission revenue due to the unfixing of commission rates could seriously hurt industry profits and perhaps disrupt the ability of the industry to provide service. As is discussed in Chapter 5, however, cost reductions can be expected to offset revenue reductions.

The importance of commission fees as a source of revenue varies significantly from firm to firm. It follows that the effects of competitive rates will also vary significantly among firms. Because the 'mark-up' over the cost of executing trades is much greater for institutional clients (large volume traders) than it is for retail clients, institutional rates are likely to be competed down much more than retail rates. Therefore, firms that depend most heavily on institutional clients will be the most vulnerable to the effects of competition. The implications for unfixing of the wide variation in the characteristics of specific firms is explored further in Chapter 5.

Securities firms also act as 'market makers' for the secondary market. They smooth the market out by buying and selling on their own account to avoid short periods of disequilibrium.

In the bond market, securities dealers underwrite new bond issues, buy issued bonds from and sell issued bonds to the investing public, and take principal positions just as they do in the equity market. The major difference between the bond and equity markets is that bonds are not traded on Canadian exchanges. (They are traded on most major exchanges outside of Canada, including those in New York, Tokyo, London, and Frankfurt.) Consequently, Canadian securities firms trading in bonds act

as dealers rather than brokers. Fixed commissions do not exist in the bond market since, as dealers, firms make a profit on the bid-ask spread, which cannot be fixed. In any case, fixed fees for dealer services would not be sustainable, since the industry has no mechanism by which it can control individual bond dealers.

Securities dealers also generate revenue from commodity and option trading, providing margin loans to investors and serving a minor banking function for investors who leave cash on deposit with the broker for short periods between selling and buying. There are no fixed fees for any of these activities.

Since securities dealers have not been permitted to compete on the basis of price, in the provision of brokerage services, they have competed by offering clients various free services in conjunction with the execution of trades. These ancillary services include market research (investment analysis), financial planning and advice, storage of securities, etc. The particular incentives of service competition when it is not complemented by price competition serve as a major argument in support of competitive rates. This issue is discussed further in Chapter 5.

Many securities firms have diversified into activities outside the trading of securities. Diversification is normally carried out through holding companies that own a securities firm but also invest in other businesses, which tend to be quite independent of the companies' stock brokerage activities; therefore, despite the TSE's concern that the incentive to diversify may be increased by the introduction of competitive rates, the issue of diversification has little bearing on the issue of price competition.

#### The brokerage function: stock trading<sup>6</sup>

In Canada, trades of corporate shares are executed on the five stock exchanges: Toronto, Montreal, Vancouver, Alberta, and Winnipeg. A comparison of the activity on the exchanges is provided in Table 4.

The Toronto Stock Exchange (TSE) accounts for almost 80 per cent of the value of Canadian trading. The Montreal Stock Exchange (MSE), which accounts for only 10 per cent of total trading value, provides a local facility for Quebec investors. The bulk of its listings are interlisted with the TSE.<sup>7</sup> The Vancouver and Alberta stock exchanges (VSE and ASE), with approximately 10 per cent and 1 per cent of total Canadian value of

trading respectively, primarily offer speculative issues. Few of their listings also appear on the TSE and MSE boards. The difference in the type of security listed is highlighted by the difference in average share price of traded securities: the average price on the TSE and MSE is approximately eight times that on the VSE and ASE. The Winnipeg Stock Exchange (WSE) is a very small regional exchange. The ensuing discussion of the mechanics of stock trading refers specifically to the TSE; however, the other Canadian exchanges operate similarly.

Only the shares of listed companies can be traded on the TSE. A company's being listed provides liquidity for its investors, since it gives them access to a centralized trading system. Since the liquidity of a stock is important to investors, a listed company generally finds it easier to sell new shares than a company that is not listed. This factor provides an incentive for seeking to be listed.

Each exchange has a number of listing requirements.<sup>8</sup> Some firms cannot meet these requirements, others choose not to. In general, the more frequently traded securities are listed on an exchange, while less frequently traded shares are not.

Shares in companies that are not listed on an exchange can be traded through the over-the-counter (OTC) market. Investors in OTC stocks trade with dealers rather than other investors. Each dealer carries inventories of certain OTC stocks. An investor who wishes to buy a security is sold shares out of the dealer's inventory. An investor who wishes to sell an OTC stock sells his shares to a dealer, who adds them to his inventory. The OTC market's Ontario register lists 1,500 securities. Since there are no fixed commission rates for OTC market executions, and since OTC operations are totally independent of the exchange floor, the OTC market will not be affected by the unfixing decision in any important way.

Unlike the OTC market, where all trades involve a dealer as a buyer or seller, trading in listed securities is generally completed between two investors, with a securities firm acting as commissioned sales agent or broker for the buyer and the seller. The process is roughly as follows: Investors place buy and sell orders with their stockbrokers. These orders can take a variety of forms. An 'at market' order is an order to buy or sell at the best possible price. A 'limit' order specifies a minimum selling price or maximum purchase price at which the order is to be carried out. The order is completed only if the 'limit price' is realized. An 'open' (or 'good till cancelled') order remains outstanding until it can be executed in

full, whereas a 'part' order authorizes transactions involving only a portion of the shares of the full order. A 'fill or kill' order asks that if any part of the order is completed the rest be cancelled. 'Good through' orders remain outstanding until they have either been executed or a certain number of days has passed, whichever comes first. 'Contingent' orders are for the simultaneous buying of one stock and selling of another.

Whatever the type of order, the broker transmits it to a clerk operating on the exchange floor, who in turn transmits the order to a floor attorney.<sup>9</sup> In order to facilitate the watching of buy and sell orders, the exchange floor is divided into areas for trading specific groups of stocks. The floor attorney takes his orders to the appropriate area and attempts to fill them. He has a 'bid' price for each buy order and an 'ask' price for each sell order. Trades are executed at a price between the 'bid' and 'ask'. The selling price moves up or down depending on the demand to buy the security and the supply of offers to sell. Once a trade is completed, the relevant information is given to the clerk and relayed to the broker's office, where the paperwork necessary to complete the transaction is carried out.

The TSE trading floor is a continuous auction market: stocks are continually coming to the market and being sold to the highest bidder; buyers enter the market and attempt to buy at the lowest price possible. Brokers serve as agents for buyers and sellers, earning a commission fee for trades executed.

However, the TSE is not a pure auction market. In addition to brokers, registered traders operate on the exchange, earning their living from the spread between what they pay for shares and what they sell them for, rather than from commissions. It is their responsibility to avert temporary imbalances in buy and sell orders, which could cause short-term price instability, by providing bids and offers for certain classes of stocks to which they are assigned. The TSE, therefore, mixes dealer and auction principles to maintain an orderly market.

Once the buyer and seller have been matched on the exchange floor, the transfer of ownership of the security must be recorded. This is accomplished by the buyer's and seller's brokers, who work through a centralized clearing system. There are two clearing systems in Canada. The Securities Settlement Service (SSS) operated by the Canadian Depository for Securities Limited (CDS) provides a clearing facility for the TSE and the MSE. The Vancouver Stock Exchange Service Corporation pro-



vides the same service for the VSE and ASE.

The clearing process begins when a trade is completed on the exchange floor. A three-part floor ticket is filled out, with one copy going to the exchange and the others to the buyer and seller. At the end of a trading day, the exchange transmits the aggregated information to the CDS Clearing Centre, which produces a Transaction Report. One copy of the report is retained by the clearing centre and two copies are distributed to each member of the exchange. From this information, a member's net position in a security is calculated and delivery tickets are made up and sent to the delivery brokers.

Two kinds of tasks are carried out by the brokerage industry: those that can be performed most economically by a single organization, due to increasing returns to scale, and those that can be performed economically by a large number of separate firms. The former tasks are allocated to the exchange (and the CDS), which has monopoly control of key components of the execution process. However, this monopoly is owned and in turn controlled by scores of member brokers. The latter tasks, performed by individual brokerage firms, are basically selling and related support services. The primary service being sold is the matching of orders which is an exchange function.

The industry exhibits the unusual structure of competitively selling what is essentially a monopolistic service. It is this unique feature that has made it possible for the industry to fix brokerage rates throughout most of its history. Activities of the securities industry that do not depend on a monopolistically controlled centralized function (for example, underwriting and dealer activities) do not have fixed rates. In the absence of a centralized function, comparable to the exchange's role, that is naturally monopolistic, entry into the industry cannot be controlled. As a result, the means of enforcing fixed rates does not exist.<sup>10</sup> The discussion of competition in the industry in Chapter 5 expands on this feature of the industry and its implications.

### Types of investors

Several of the issues involved in the unfixing debate draw a distinction between institutional and retail investors.<sup>11</sup> The primary difference between them is one of scale: institutional investors normally engage in larger and more frequent transactions than retail investors, who are typ-

ically individuals investing personal savings.<sup>12</sup>

Institutional and retail investors tend to exhibit different investment behaviour. Institutional investors tend to be highly risk-averse; hence, as a group, they trade in a small number of large volume 'blue chip' securities. They favour these stocks partly because they are less risky, partly for liquidity reasons, and partly because the price of stocks whose daily volume is small can be destabilized by transactions of the size that many institutional investors normally undertake. The consequence is that institutions are primarily interested in a relatively small proportion of all listed securities. This consequence has two implications. First, research done for institutional investors tends to concentrate on a fairly small number of securities. Second, if all investment were channeled through institutions, there would be danger of a shortage of investment funds for smaller corporations.

Although individual retail investors have smaller and therefore generally less diversified portfolios than individual institutions, retail investors as a class hold a wider range of stocks than institutional investors as a class. Retail investors are generally more willing than institutions to invest in the riskier, smaller corporate shares and speculative issues. Retail investors are commonly considered to be essential to the liquidity of the total market - not only because of the breadth of their holdings, but also because only a large number of traders can provide the steady flow of buy and sell orders that a continuous auction market requires if it is to operate smoothly.

Institutional investors are both clients and competitors of the securities industry, whereas retail investors are clients only. Institutions offer investment opportunities to individuals that are alternatives to direct investment in the stock market through a broker. Some such opportunities - for example, bank term deposits - may attract funds that individuals would otherwise invest in stocks. Others divert investment to the stock market. Thus, individuals buy life insurance policies and a portion of their premiums are invested in the stock market. They may pay for the premiums by reducing consumption or bank savings rather than by reducing equity holdings. Finally, some opportunities may simply shift investment in stocks from retail to institutional investors. For example, rather than invest directly in stocks, individuals may invest in a mutual fund, which, in turn, invests in the stock market.

It is unclear whether the net effect of such opportunities is to in-

crease or decrease the demand for equity securities. However, it is tempting to suppose that since institutions increase the diversity of investment instruments available to investors, they also increase the total demand for equity investments. By giving the small investor access to diversified portfolios, institutions lower his risk. As a result, investors are willing to pay a higher price for shares than they would if they held less diversified portfolios of similar securities. The demand for securities, therefore, is increased. The effect of institutions on the demand for trading of securities, as opposed to the demand for the securities themselves, is a totally separate consideration.

Because brokers can execute large volume trades more economically than small ones, institutions pay lower brokerage fees as a percentage of value traded than individual investors. Institutions also tend to trade more frequently. However, the saving on brokerage fees per transaction is greater than the expense of more frequent trading. Consequently, it is fairly safe to deduce that increased institutionalization (more shares held by institutions and fewer retail investors) tends to reduce total industry commission revenue.

Nevertheless, the effect of institutionalization on profitability is uncertain. It is widely accepted that institutional commission fees under the fixed-rate schedule are significantly more profitable, exclusive of ancillary services, than retail rates. But whether this greater profitability is fully offset by the cost of the ancillary services provided as a means of competing for institutional business is not known empirically. The likely effects of this service competition are dealt with in Chapter 5.

The likely effect of changes in the relative brokerage commission fees of retail and institutional clients on the degree of institutionalization of the stock market was discussed extensively during the OSC hearing. Although the evidence is not absolutely conclusive, the U.S. experience with radically declining relative institutional rates and the Canadian experience with an increased taper in the rate schedule show no evidence that commission rates affect institutionalization. It is consistent that the effect is small, since all institutional investors offer a product other than direct investment in the stock market. They offer insurance, low-risk investments, pension savings, shares in a broadly based portfolio, etc. An individual investor's choice between the product of a financial institution and direct investment in the stock market is based primarily on the product preferred, not the commission rates incurred. Furthermore, other

overhead costs (selling, administration, etc.) of institutions exceed any saving in brokerage fees. Any change in their commission costs will not significantly alter the total transaction costs incurred by individuals who invest in financial institutions. Declining institutional rates will have a small effect, if any, on the costs investors incur on different investment vehicles.

The proportion of trading volume accounted for by institutional investors has increased significantly during the last twenty years, although most of the growth occurred before 1975. (See Tables 5 and 6.) The increase reflects a number of factors that have affected the investment patterns of individuals, including tax changes and the popularity of mutual funds. However, the trend was slowed by the market downturn that came with the 1974 slump, which apparently persuaded many institutions to turn from stocks to fixed income securities. Stock holdings as a percentage of institutional assets reached a decade low in 1978.

The effects of past schedule changes indicate that factors other than relative commission fees are the primary determinants of the degree of institutionalization. For example, the 1977 schedule change, which reduced the cost of large-volume trades, did not increase the proportion of institutional business. In fact, for three years following the schedule change, the proportion of institutional business fell.

Historical trading patterns indicate that retail investors are more sensitive than institutional investors to market conditions. As a result, retail trading is more volatile than institutional trading. In recent years, the proportion of retail trading has increased during bullish periods and declined in bear markets, such as the relatively inactive period in 1981 and early 1982. (This can be seen from a correlation of the volume figures of Tables 5 and 7.) The implication is that brokerage firms with a primarily retail business are more susceptible to the cycles in trading activity than those with a strong institutional clientele. The data in these tables also suggest that, apart from the effects of market activity, the level of institutionalization has increased steadily over the last ten years.

Although institutional investors are often large or monolithic institutions such as trust companies, pension funds, banks, etc., the beneficial owners of the dollars invested by the institutions are typically the smallest investors in society. Many of the invested dollars are the pension and insurance savings of workers; the bulk of the rest is personal savings. It is the investors with the smallest portfolios who place their money with



institutions rather than invest on their own. Small investors have the least at stake in their investment decisions and therefore can least justify time and effort spent making investment decisions.

## Regulation

The Canadian financial industry is subject to both extensive external regulation by provincial securities regulatory agencies and to extensive internal regulation. Since securities regulation is a provincial matter, there is some variation among provinces; however, the provincial regulators do cooperate to minimize interjurisdictional inconsistencies. For example, the Canadian Securities Administrators, who include all the provincial commissioners, meet annually to deal with any issues that require interjurisdictional cooperation. As a result of this cooperation, the differences among provinces are generally minor.

Across the country, the primary rationale for securities legislation is to protect the investor. This protection is a goal in itself, but it also serves to maintain confidence in the brokerage industry and, hence, the Canadian financial system. By maintaining confidence, the regulators help the capital market to function smoothly, and this in turn facilitates continued business growth.

Regulation of the securities industry seeks primarily to ensure that investors have access to sufficient information to make rational investment decisions. The goal of regulation is not to remove the financial risks associated with specific equity investments, but to ensure that investors are aware of those risks. In other words, the risk of misleading information being given to investors is minimized. This objective is met by requiring disclosure of information pertinent to investments. The principle of full disclosure applies to prospectus requirements. The principle of full disclosure applies to prospectus requirements, takeover bids, insider trading, and other important areas.

To enforce the principle of full disclosure, provincial legislation relies on two general methods: registration and investigation. The first ensures that the Ontario Securities Commission (and its counterparts across Canada) has control over those selling securities to the public, and that those persons are properly qualified. Registration applies not only to the brokerage firm itself, but also to the salesmen employed by the firm.

The OSC uses registration to ensure that the rules pertaining to full

disclosure are adhered to. It requires the registration of underwriters, dealers, and advisers. As noted previously, underwriters act as principals in distributing shares of a company to the public, whereas dealers conduct trading both on their own account and as agents. Advisers do exactly what their title suggests: they give advice to prospective buyers and sellers of securities. For purposes of registration, brokers are defined as members of the Toronto Stock Exchange, broker-dealers as members of the Broker-Dealers Association of Ontario, and investment dealers as members of the Ontario District of the Investment-Dealers Association of Canada. There are also mutual fund dealers, scholarship plan dealers, securities dealers, and securities issuers. Advisers are categorized as investment counsel, portfolio managers, and securities advisers. Broker-dealers, investment dealers, and securities dealers are automatically registered as underwriters. Once a firm is registered as a dealer, the securities salesmen employed by that firm must also be registered. The OSC has control over all TSE bylaws that it considers to affect the public interest.

The OSC is also empowered to investigate any complaint of wrongdoing. Although it does not have the power to fine or imprison, the OSC can suspend or cancel registration of a broker or brokerage house. The OSC can also order that trading in a particular security be halted. These decisions are made when the director of the OSC perceives that the public interest is being harmed.

The OSC, which is part of the Ministry of Consumer and Commercial Relations, is made up of nine members including a chairman and vice-chairman. Day-to-day administrative matters are attended to by the director of the commission. The legislation under which the OSC currently operates is the Securities Act 1978.<sup>13</sup> The OSC's role as a price regulator stems from its authority under the act to rule on every bylaw of the TSE that it considers to affect the public interest.

Regulation by the Canadian Securities Administrators is complemented by internal regulation, carried out by the various self-regulatory organizations (SROs) to which securities firms must belong for purposes of registration (Toronto Stock Exchange, Broker-Dealers Association of Ontario, Investment-Dealers Association). The SROs are industry associations that regulate their members' activities subject to the provincial securities regulators.

The SROs represent the wishes of the industry as a whole and impose

standards intended to benefit all their members. Since one of their roles is to maintain investor confidence, they are concerned with maintaining responsible behaviour on the part of their members. As a result, the regulatory activities of the SROs usually coincide with what the Ontario Securities Commission considers the public interest. Furthermore, the Ontario Securities Commission oversees the activities of the Toronto Stock Exchange and other SROs to ensure that their self-regulatory behaviour is consistent with the public interest (other exchanges are regulated by their respective external regulators). In some cases, this involves pushing the exchange to regulate its members more tightly than would otherwise be done. In other cases, it involves overruling and disallowing regulations that are deemed to be contrary to the public interest. The recent decision to unfix brokerage commission rates is an example of such an overruling of an exchange bylaw.

Since the Toronto Stock Exchange is an association consisting exclusively of securities dealers whose votes determine its policies, it is quite natural to expect the TSE to serve the interests of the securities industry first and those of investors second.<sup>14</sup> Where possible, the TSE acts to stabilize the incomes of its members (reduce risk) and to increase industry income. Of course, it is the role of the Ontario Securities Commission to ensure, as best it can, that actions taken by the exchange are not only beneficial to the industry but also serve the public good. The OSC's presence discourages the exchange from neglecting consideration of the public interest in any regulations it may impose on its membership.

As is discussed in detail in Chapter 5, the fact that the TSE represents the financial interests of its members implies an incentive to make the entry of new competitors difficult, and to fix commission rates at the most profitable level. To the extent that the exchange is free to set commission rates, subject to OSC approval, it is natural to expect the TSE to exhibit cartel behaviour. Historically, the TSE's practice of setting commission rates for its members appears to have been undertaken simply to avoid price competition - as was also the case in the United States and elsewhere. Rate fixing is rational, profit-maximizing behaviour for any industry that can successfully do it. The Ontario Securities Commission undertook the role of regulator of the commission rate schedule in an effort to ensure that the rates did not conflict with the public interest, and it demonstrated concern about the appropriateness of having fixed rates at all as early as 1975, when it decided to have a hearing on the

matter.<sup>15</sup> Ultimately, the OSC determined that the fixing of rates does not serve the public interest, as did the Quebec Securities Commission and the Superintendent of Brokers, British Columbia.

### Commission rates and profitability

In the past, brokerage commission fees for TSE trades valued under \$500,000 were fixed and enforced by the exchange (brokers were free to negotiate fees for trades valued over \$500,000). Since 1966, the TSE has needed OSC approval of its fixed minimum commission rate schedule. Since 1 April 1983, rates have been competitively determined.

The fixed-rate schedule was a TSE bylaw that fixed a minimum rate that member brokers were permitted to charge. In addition to not being permitted to discount below the schedule, brokerage houses were prohibited from seeking to increase their business by offering rebates or by providing 'soft dollar' services.<sup>16</sup> Brokers were allowed to charge rates above the schedule.

The last few fixed commission schedules had a built-in taper that had the effect of significantly reducing the per share cost (measured in either cents per share or per cent of trading value) of large volume trades relative to small trades (see Tables 8 and 9). The discount was possible because the per share cost of execution declines with the volume of the trade. For example, under the post-1977 fixed-rate schedule the cost of trading 10,000 shares at \$25 each was less than one-third the cost per share of trading 500 of the same shares (see Tables 10 and 11).

Tapered rates applied only to 'single orders', defined as trades executed for one client for one account on one side of the market in one class of security on one day, to be delivered to one location. As well as increasing the taper, the 1977 schedule relaxed the definition of a single order to allow the accommodation of executions over five consecutive days. The change made it easier to transact a single order execution that was large enough to qualify for the tapered rate (over \$100,000) or to qualify for negotiation (over \$500,000).

The result of the taper was that institutional investors incurred lower average per share brokerage fees than did individual investors. In the pre-unfixing period, the average volume of institutional investors' trades was approximately double that of individuals', and the average share price was almost three times greater for institutional investors; hence, the aver-



age value of an institutional trade was five to six times greater than the average value of a retail transaction (see Table 12). Since institutional investors tend to trade higher valued stocks, institutional per share costs were higher (see Table 13). However, following the commission rate schedule change in 1977, institutional costs fell significantly. They continued to decline as the average value of institutional trades increased. The trend to increasing value primarily reflected an increase in the average value of traded shares, but also resulted from a slight upward trend in the average number of shares per transaction (see Table 14).

Cost per share for individuals was higher under the post-1977 schedule than under the previous rate schedule. The benefits of the taper were outweighed by the effect of generally increasing share prices for individual investors.

The effect of the tapered schedule on commission rates measured on a per cent of principal value basis was that institutional costs were approximately one-third less than individual costs under the pre-1977 schedule and about half of retail costs under the post-1977 schedule (see Table 15).

The increased taper was a response to the introduction of competitive rates in the U.S. in May 1975, which resulted in a significant reduction in institutional rates there. Competitive rates in the U.S. led to pressure for reduced institutional rates on the Canadian exchanges to avoid losing institutional business. It also created pressure for Canadian brokerage fees to reflect competitive rates more closely, as is evidenced by the fact that in 1976 the OSC held hearings on the matter of unfixing rates. As a consequence of these events, the post-1977 TSE commission rate schedule deviated less from competitive rates than U.S. rates did prior to the unfixing of U.S. rates in 1975. Thus, the effects of unfixing can be expected to be less dramatic here than they were in the U.S.

During the 1970s, profitability on the Toronto Stock Exchange was highly volatile. This result was due, in part, to large fluctuations in share volume and value (see Tables 16 and 17).<sup>17</sup> Commission revenues fell as a percentage of total revenues during the mid-1970s; however, by 1979 all of that drop and more had been recovered as the market registered record trading levels. For the period 1971-79, the securities industry reported an average annual pre-tax return on capital of 12.48 per cent. In the same period, life insurance companies and chartered banks reported annual averages of 7.46 per cent (variance 2.59) and 20.14 per cent (variance 2.26) respectively.

A comparison of gross revenues, gross expenditures, and capital employed in the securities industry over the period 1971-79 shows that much of the variability in profits stemmed from revenues. The variance in industry revenues was 26 per cent greater than the variance in expenditures and over four times greater than the variance in capital employed (see Table 18).

The 1970s saw the industry attempt to diversify (Chung 1980, 14-15). Commission revenues grew more slowly than gross revenues, and miscellaneous revenues (mutual fund sales, options, commodities, and other) grew more quickly. Trading revenues (principal trading in bonds, money market activities, principal trading in stocks, registered trading, and arbitrage) decreased in importance during the latter half of the decade. Underwriting revenues have shown little in the way of a consistent trend, since they are dependent on financing requirements and therefore on the general level of economic activity.

Many firms have attempted in recent years to improve their financial performance by merger growth, which facilitates diversification of activities and increases the capital base. As a result, there has been a modest trend to increased concentration in the industry. The number of firms fell from 91 in 1973 to 79 in 1980, while the share of total trading value done by the top ten firms increased from 43 per cent to 50 per cent (see Table 19).

### Competition among exchanges

Because there is a great deal of overlapping membership among the Canadian exchanges, competition among the exchanges is limited. Competition is not restricted in this way for trading of securities that are inter-listed in Canada and the U.S., although distance does tend to reduce the potency of competition. U.S. rates appear to have been an important factor in at least the last two changes in the TSE commission rate schedule, since the changes reduced commission fees and so brought them closer to U.S. rates. It would appear that either these changes were effective, or cross-border competition is very weak, since the split on Canadian-based interlisted stocks has been very stable, with about 75-80 per cent being completed in Canada (see Table 20).

The effect on interlisted trading of the decline in average commission rates for U.S. exchanges after rates were unfixed in 1975 provides some

indication of the extent of direct competition between American and Canadian exchanges. The TSE's share of trading in interlisted securities has dropped about 20 per cent since 1975 despite the increased taper introduced by the TSE in 1977 (see Table 21). Although the New York Stock Exchange's share of trading in interlisted securities has declined, the American Stock Exchange's share has increased substantially. It is difficult, however, to confidently attribute this shift in trading to lower commission rates on the U.S. exchanges, since other factors have also been important.

Between 1975 and 1980, the American share of the value of trading in interlisted Canadian oil and industrial stocks rose from 36 per cent and 14 per cent respectively to 60 per cent and 46 per cent (see Table 22). In addition, oils increased their importance in total interlisted trading on American markets from 12 per cent in 1975 to 41 per cent in 1980 (see Table 23). The probable reason for the shift of trading to the U.S. has been growing American investor interest in Canadian oils; thus much of the trading has been completed by Americans dealing through American brokers rather than by Canadians dealing on American exchanges.

Due to recent technological advances in computerization and data communications, the extent of international competition is likely to increase dramatically in the future. As can be seen in Table 24, the TSE measures up as a major international exchange, comparable to all other major exchanges except the New York Stock Exchange. The competitiveness of the TSE internationally may be important to its ability to remain a major exchange in coming decades.

#### Differences between the Canadian and U.S. markets

An important aspect of the debate over competitive commission rates was the assessment of the relevance of the experience of the securities industry in the United States with competitive rates. While the great fears of the U.S. industry have not come to pass, in spite of eight years of competitive rates, it does not necessarily follow that the Canadian experience will be the same. Are there differences between the American and Canadian markets that would cause the introduction of competitive rates to lead to significantly different effects in Canada than in the United States?

The most obvious difference between the two markets is in their size (see Table 25). During the 1970s, the TSE generally processed between

10 and 20 per cent of the volume and between 3 and 7 per cent of the value of the New York Stock Exchange (NYSE). At the end of the 1970s, the TSE was processing 24 per cent more volume than the American Stock Exchange (AMEX), but only 95 per cent of the value. The difference between volume and value is accounted for by the higher average share price on the American exchanges.<sup>18</sup> AMEX prices are lower than NYSE prices, reflecting AMEX's role as a proving ground for stocks that are eventually listed on the NYSE.

The trading volume of the TSE is currently comparable to the NYSE volume of 1970<sup>19</sup> and approximately half of the NYSE volume at the time of unfixing in the U.S. (1975). It is interesting to note that the relative sizes of the NYSE and AMEX are very close to the relative sizes of the Toronto and Vancouver exchanges.

While the NYSE has significantly greater volume and value than the TSE, it also has many more member firms. As a result, the difference in volume on a firm-by-firm basis is much less than the difference between the exchanges themselves.

An important characteristic of the American market that has resulted directly from the unfixing of rates has been the emergence of discount brokers. By 1980 they had captured 5-6 per cent of market share.<sup>20</sup> This group has shown higher-than-average rates of growth and higher-than-average profitability, indicating considerable demand for its services. It should be noted that no witness at the OSC unfixing hearing was of the opinion that discount brokerage is likely to expand beyond 10 per cent of total market share.

TSE members are slightly more dependent on commission income and much less dependent on miscellaneous sources and interest income than NYSE members (see Table 26). This reflects the greater diversification of the U.S. industry.

In 1979, the 81 members of the Toronto Stock Exchange employed capital of \$255 million, of which \$126 million derived from retained earnings and \$129 million from share capital and subordinate loans (Chung 1980, Tables 9, 10, 16, and 17). Industry profitability has tended to be volatile. In 1979, a healthy 32.10 per cent return on this capital was earned, compared with a decade average of 13.19 per cent. The industry is not particularly concentrated by Canadian standards: the top 25 firms account for 50 per cent of revenues. Revenue sources are becoming increasingly diversified.



Member firms of the New York Stock Exchange averaged a 16.4 per cent pre-tax rate of return over the years 1972-80, with a standard deviation of 10.77. During the same period, TSE member firms averaged 29.62 per cent per annum with a standard deviation 15.99 (see Table 27). Profitability in Toronto is far less stable than it is in New York, which at least partially explains the higher average return in Toronto. The expected return required to attract investment is normally higher where risk is greater.

Most of the world's major stock exchanges have maintained fixed minimum commission rates since they were formed. Their fixed rate schedules have been periodically undermined by competition from rival exchanges and by various types of 'cheating' by their own members, such as trading off the exchange and offering rebates, or their equivalent, to clients. However, due to the natural monopoly features of exchange trading (discussed in Chapter 5) and the web of rules developed to stop members from bypassing the rate schedule, fixed minimum commission rates have remained a feature of exchange trading throughout most of the life of the major exchanges.

Fixed rates were first formalized by the Buttonwood Tree Agreement drawn up in 1792 by the members of the predecessor of the New York Stock Exchange.<sup>1</sup> The provisions of this and subsequent agreements led West and Tinic (1971, 191) to express the view that the New York Stock Exchange was

...an institution conceived from the outset as a cartel arrangement designed to monopolize the business of providing trading facilities for certain classes of securities.

The Toronto Stock Exchange, which was formed in 1861, followed the American precedent. The original set of rules governing the activities of the exchange required, among other things, that every applicant be voted in by a majority of at least six to one. This rule had the effect of tightly controlling entry to exchange membership. By 1882 the bylaws specified a minimum commission rate, with exceptions to the rule for intra-exchange trading. As one commentator has noted:

The formation of an association of stock brokers served to reduce competition among them in a number of ways. Firstly, it established a one-price

system for each security rather than the multiplicity of 'prices current' that was a feature of the market place when brokers operated independently. Secondly, the Stock Exchange established uniform commission rates for all member brokers. (Stoll 1979, 10.)

The fixed rates of the TSE were not subject to review by any outside regulator until the introduction of Ontario's Securities Act of 1966, which broadened the powers of the Ontario Securities Commission. Although the 1966 act did not explicitly authorize or require the OSC to regulate rates, it did make provision for the commission 'where it appears to it to be in the public interest, [to] make any direction, order, determination or ruling...with respect to any by-law, ruling, instruction or regulation of any...stock exchanges.'<sup>2</sup>

Initially, the OSC approved the rate structure without requiring detailed justification of the rates. After the rate hearing of 1973, however, the commission examined its role as a rate-approving body. The OSC stated that although its approval of the exchange's commission rate structure was necessary, it did not wish to become a rate-selling body (OSC 1973, 107). The OSC apparently feared that if it became involved in extensive rate hearings, such as those typically associated with publicly granted monopolies (energy and telecommunications, for example), it could interfere with its ability to carry out its primary task of monitoring disclosure, trading activity, etc. The OSC's only concern was to ensure that rates were not contrary to the public interest by being excessive.

The OSC's 1973 decision also expressed the view that although it has been approving rates since 1967, it had insufficient information on which to base its approval. The commission therefore requested the TSE to provide more cost information than it had provided previously. The Revenues and Market Analysis (RAMA) Study and the Cost Study were then undertaken on an annual basis. However, the OSC soon began to question whether even the extensive information provided by these studies was an adequate basis for approving rates.

During this period of reflection on its role as a price regulator, the OSC observed developments in the United States with respect to the regulation of fixed brokerage commission fees. As a result of serious abuses that were seen to be caused by fixed rates, the Securities and Exchange Commission forced the U.S. industry to adopt major changes in the fixed rate schedule, and ultimately to unfix rates (as of 1 May 1975). This action raised the question in Canada as to whether there was a rationale

for maintaining fixed rates in the Canadian securities industry.

The OSC decided in 1975 to convene hearings to examine the question of unfixing brokerage commission fees (OSC 1975, 278). The action was taken as part of its decision not to extend the 10 per cent surcharge introduced in October 1974 in response to low industry profits throughout 1973 and 1974 (OSC 1974, 199).

Hearings were held in July and October 1976. Submissions were received from financial institutions, the TSE, academics, and other parties. In the end, a majority of the commissioners sustained those who argued against the introduction of negotiated rates. While the academics argued that it was in the public interest to introduce competitive rates without delay, the exchange argued that negotiated rates would give undue power to institutional investors and that destructive competition would result. Most of the institutions represented argued that although the fixed rates were too high, a move to negotiated rates should be undertaken cautiously. This position stemmed from the concern of some financial institutions, as well as some TSE members, that the introduction of competitive rates could have a detrimental effect on the quantity and quality of industry research. The industry argued that unfixing would increase retail rates, encouraging small investors to invest through large financial institutions. They predicted that increased 'institutionalization' would result, damaging liquidity and allocational efficiency in the capital market. They also feared that concentration on both the buying and selling side would adversely affect the operational efficiency of the market. Although many witnesses cited the brief experience of the United States with competitive rates, the majority of the commissioners felt that it was too soon to rely on the evidence from Wall Street as a useful indicator of the impact of competitive rates on the United States brokerage industry.

The contrary arguments were best expressed in the form of the dissenting opinion written by Commissioners Beck and Johnston. One of the major problems faced by the OSC in its role as a rate setter was the difficulty of allocating costs to specific activities. The dissenting view of Commissioners Beck and Johnston argued forcefully that this made it virtually impossible for the OSC to determine the appropriate level for fixed commission rates. Nor did the dissenters believe that the industry itself was classically suited to rate fixing.<sup>3</sup> They also stressed that since rates may have been set too high, rate fixing might have resulted in there being too many brokers for the volume of business. They concluded that

it was inappropriate for the OSC to act as a rate fixer in the brokerage industry.

The academics argued that substantial benefits would result from the introduction of competitive rates. They foresaw increased competition between exchanges listing the same stocks and a rationalization of the industry that would increase its operational efficiency. They also felt that, as brokerage products became unbundled and investors had a wider choice, there would be increased retail participation in the capital market.

The OSC majority rendered its decision to continue with fixed rates on 28 October 1976. It described the appropriate criteria for its decision as follows:

If one is satisfied that the industry is a necessary one, that its survival is essential, that the fixed rates are not a protective tariff, that the industry is subject to effective competition and that the rate structure does not give the industry or any segment of it what is perceived to be unreasonable profits, it can be concluded that fixed commission rates per se are not against the public interest. Such a rate structure should be perceived as fair by those whom the industry serves. (OSC 1976, 292.)

While the OSC majority agreed that price competition was the best form of competition, it argued that there were in fact other forms of competition in the marketplace that rendered price competition unnecessary. However, at least one of the commissioners who favoured the maintenance of fixed minimum commission rates indicated that the OSC's decision was an interim one: it would have to be reviewed after sufficient time had passed to observe the effects of unfixing in the U.S. market. The OSC's decision also called upon the TSE to propose a new rate schedule. The TSE's proposal was considered at a hearing held in June 1977 and the new schedule was implemented on 1 September.

In 1981, the OSC convened new hearings to re-examine the issue of fixed brokerage commission fees in light of the accumulated evidence of six years of American experience with competitive rates and the current conditions in the Canadian securities industry. On 25 June 1982 the Ontario Securities Commission announced its decision that 'it is not in the public interest to permit the by-laws of the TSE to continue to provide a fixed minimum commission rate structure for brokerage transactions.'<sup>4</sup>

The OSC hearings brought together a variety of participants. Armed with the votes of a majority of its members, the TSE led the defense of fixed rates; yet a sizeable minority, including many large, diversified firms, favoured competitive rates.<sup>5</sup> This was a notable change from 1976,

when industry support of fixed rates had been virtually unanimous.

The case favouring price competition was presented by the OSC staff and the Director, Investigation and Research, Combines Investigation Act. The Director's purpose was to encourage an increase in the degree of competition in the industry unless there were specific reasons why it was against the public interest to do so. In the director's opinion there was no such public-interest rationale for fixing prices.

Apart from a couple of institutional investors who were called to give evidence by securities firms, the investment community did not appear. The retail side of the market was represented primarily by letters, the bulk of which favoured the unfixing of commission rates. A survey of institutional investors commissioned by the TSE indicated that they were reasonably content with the status quo. However, there also seemed to be very little feeling among institutions that a move to competitive rates would bring negative repercussions.

Of key concern to all those appearing at the hearing was the effect of a move to competitive rates on the Canadian financial market. Ultimately, the debate came down to the question of whether such a move would benefit the financial market or harm it. The OSC's decision to unfix rates reflected a perception that price competition in the securities industry would in fact facilitate the capital market in that it would reduce the cost of transactions and rationalize the services provided at that cost. Essentially, the OSC demonstrated its faith that the securities industry was sufficiently resilient to cope with unfixing. Its resilience had been demonstrated by its successful adaptation to changing market conditions throughout its existence. The arguments for and against this perception are described and analyzed in the following two chapters.<sup>6</sup>



### The case for competitive commission rates

The case for competitive rates in the securities industry rests on the generally accepted theme of the merits of competitively determined prices. The basic argument is quite simple.

When a firm competes on the basis of price, it continually strives to increase its market share by offering a more attractive product than its competitors, in terms of the price charged for a given level of quality (i.e., value). The competitive process results in a number of desirable incentives. Firms have a strong incentive to find ways to produce more economically, for by doing so they can underprice the competition and gain market share. Firms have a strong incentive to find market segments with distinctly different tastes and preferences that they can attract by serving their particular needs better than other firms do. Finally, firms have a strong incentive to improve their products to the extent that improvement is cost-effective, since this will attract additional business.

Complementing these incentives are certain disciplinary pressures. Any firm that does not update production methods to keep costs down, improve quality, and meet the changing needs of society suffers declining sales and eventual elimination. In addition, price responds to under- or over-capacity in an industry, attracting new entry or forcing the least efficient firms out as required to maintain an efficient capacity level in the industry.

Briefly, competition results in the lowest possible price to consumers and the range of products that best meets their desires. Life may be hard and uncertain for producers, but those who produce efficiently and meet the desires of consumers earn a fair return for their investment of time and money. Although producers in many industries may argue that

this scenario of bliss does not apply to their industry in particular, they generally accept that price competition is desirable in other industries - particularly those that produce the goods and services they consume.

Whatever the relevance of the general competitive scenario to any particular industry, there is no doubt that Canada's economic structure is based on the principle that a competitive marketplace most fairly and efficiently serves the interests of both producers and consumers since, when competition is unrestricted, market prices reflect the economic costs of supplying goods and services while they maximize the availability and variety of those goods and services. As the Director of Investigation and Research, Combines Investigation Act argued during the 1981 Ontario Security Commission hearings, 'competition is the law of the land in Canada and price fixing is the exception' (DIR 1981, 3).

The implication of the preceding argument is that in the absence of any specific evidence that competition will fail to operate effectively in the brokerage industry, the practice of fixing rates cannot be justified. For this reason, both the Director of Investigation and Research and the OSC staff submitted that the onus of proof lay with the defenders of fixed rates. The OSC indicated its acceptance of that line of thinking by referring to the director's submissions at length in its final decision.<sup>1</sup>

Looking beyond the brokerage industry to the entire economy, it would have to be said that the desired status quo position of the Canadian economic system is price competition. This suggests that the burden of proof should lie with those who support the view that special circumstances exist in the case of the securities industry which cause it to be unsuited to competitive pricing.

The key question, therefore, is whether the securities industry is 'unsuited to competitive pricing'.

It should be noted that the implicit assumption of this preference for price competition is that the alternative, regulated fixed prices, does not deliver the same level of efficiency as competition. While in theory there is no reason why regulated prices cannot be as efficient as market-determined prices, the reality is that regulation is imperfect. The regulatory process itself is not costless. Regulators cannot respond to changing market conditions quickly, since it often takes some time to recognize change, let alone determine its impact on the optimal price level. Regulated prices are unlikely to reflect the full extent of the diverse tastes and preferences of consumers. The single price, traditional in the brokerage



industry, restricts diversity. True economic costs and the appropriate rate of return cannot be accurately determined in the the absence of market forces. The difficulties of price determination are particularly severe in the securities industry, since a large portion of costs are overhead costs that are shared by brokerage and other, non-regulated services. Finally, although the incentive for efficiency remains (in the form of potential increased profits) when price competition is restricted, an important aspect of market discipline is lost. Firms that are inefficient do not have to worry about being underpriced by the competition. Consequently, there is a real danger that prices will reflect the costs of the inefficient rather than the costs of the efficient.

Of course, as the TSE pointed out during the OSC hearing, no real-world competitive market is without its imperfections. Consumers are never perfectly informed about the quality of the products they buy, nor are they fully aware of all the available alternatives in the marketplace. However, the proponents of price competition argued that the imperfections of price regulation in the securities industry were significant, while the imperfections of price competition would be relatively minor. Price fixing in the securities industry involved real and substantial damage to the public good, while offering little or nothing in the way of offsetting benefits. Furthermore, the only potential beneficiary of fixed rates was the industry itself, rather than investors, the Canadian financial market, or the public at large.<sup>2</sup>

Finally, it was argued that although economists, and society, recognize that some markets have characteristics which cause market failure - the failure of competition to effectively serve the public interest - none of these characteristics was exhibited by the brokerage industry. Even if the market failure claimed by the TSE did in fact exist, the appropriate remedy would be not price regulation but some other form of market intervention.

#### The case for fixed commission rates

The case for fixed commission rates in the securities industry rests on the view that although price competition is the norm in Canada, 'special circumstances exist in the case of the securities industry which cause it to be unsuited to competitive pricing' (DIR 1981, 5). This view was put forward during the 1981 OSC hearings by representatives of the Toronto Stock

Exchange. The 'special circumstances' argument was approached on four levels.

First, the TSE argued that in the brokerage industry the competitive price level would not be the price level that best served the public interest. Prices had to be maintained above the competitive level in order to ensure that an adequate level of research was undertaken by the industry and to enable the exchange to undertake development of new markets.

Second, the industry argued that even if the competitive price level were the socially desirable price level, competition in the brokerage industry is sufficiently imperfect that the competitive price level would not be realized when the price was unfixed. The TSE argued that market imperfections exist, among them excessive market power of institutional investors, potentially excessive concentration in the securities industry itself, and volatility of industry revenues.

Third, the TSE argued that a change in the rules would in itself create hardship for many firms, their owners, and their employees. Such a penalty would be unfair, given that the fixed-rate system has worked well, that the Canadian financial markets have been served well, and that there has been no outcry of investor complaints.

Fourth, regardless of how efficient and equitable the market for brokerage services is, what is even more important is the efficiency of the Canadian capital market. The TSE argued that fixed rates were needed to improve the liquidity of the Canadian capital market. This was accomplished through the subsidizing of research and of trading by retail clients.

### Market failure

A market is characterized by market failure if competition does not result in the socially optimal (most efficient) quantity and quality of production. Economic efficiency implies that the net surplus of the value of goods or services produced, over the cost of producing them, is optimal. The TSE's case implied that even if competition in the industry were perfect and transaction costs negligible, price competition would not result in the optimal price/quantity/quality levels.

The reason for this market failure, implicit in the exchange's argument, is that research information is a public good. Once the information

generated by research has been revealed to one client, that client can pass it along to others without restriction. Thus, producers cannot capture the full value of information they produce (even at the margin). Since producers receive only a portion of the value of the public good, it is underpriced and hence undersupplied, relative to the socially desirable and economically efficient quantity.

If this view is accepted, it may justify 'taxing' those who benefit from the information in order to subsidize its production. This is done for other public goods such as parks and law enforcement. The TSE suggested that rates fixed above the competitive level generate 'tax' revenues that subsidize research.<sup>3</sup>

### Market imperfection

When competition in a market is imperfect, the competitive price, quantity, and quality levels may not be realized. This is another type of market failure that if sufficiently severe may justify regulatory intervention to push the market closer to the competitive optimum.

The TSE described several potential market imperfections during the OSC hearing. It warned of the possibility that many institutions, due to the volume of business they control, would be able to successfully demand unreasonably low commission fees. Some brokers might consider their institutional clients so important that they would accept even unprofitable commission fees rather than risk losing the institutional clients' business. Presumably, the greater a brokerage's dependence on institutional clientele, the more vulnerable it would be to downward price pressure from the institutions. Fixed prices protect firms from institutional market power.

The TSE also expressed concern that with competitive prices commission rates would fall, particularly in periods of low volume, and many firms would be driven out of the industry. This could ultimately lead to a concentration of the industry sufficient to reduce the effectiveness of competition. Market failure could also result if there were sufficient economies of scale in the brokerage activities of securities firms to enable large firms to underprice and drive out smaller firms. In the long run, the TSE warned, price competition could lead to reduced competition, increased prices, and a less efficient market. Fixed prices, on the other hand, may retard concentration by keeping prices high enough for smaller firms to survive despite higher costs.

Even if concentration did not increase sufficiently to damage competitiveness it could have other undesirable effects. Market liquidity relies to some extent on diversity of opinion since investors need to value stocks differently for a trade to take place; increased concentration could harm the liquidity of the Canadian capital market by reducing the number of firms conducting independent research. Furthermore, the very firms that have traditionally made the greatest research effort - institutional boutiques - are the firms that would feel the impact of competitive rates the most.

The exchange suggested that in the absence of fixed rates, prices would be set by price leadership. It argued that even in the U.S., with its large number of firms, prices are set by price leadership; this is evidenced by the absence of diversity in the prices of firms offering similar services. The exchange argued that price leadership is anti-competitive behaviour and would be likely to result in excessively high prices. Since the Canadian industry consists of fewer firms than the U.S. industry, the Canadian market is more susceptible to price leadership.

Finally, the TSE argued that the volatility of industry revenues and profits is a problem that would be aggravated by competitive rates. Trading volume and commission rates would be likely to rise and fall simultaneously, since brokers would probably compete for business by price cutting most intensively when volume was low. Revenues (and profits) would be more volatile than they are when volume alone swings up and down and commission fees are fixed. The greater volatility of the competitive market would serve to adjust industry capacity more quickly to changing volume conditions, thereby improving economic efficiency. The exchange warned, however, that the effect could be greater turnover of staff, lowering the overall experience level and professionalism of the industry. The implication is that fixed rates maintain a higher level of industry revenue by keeping commission fees up during periods of low trading volume. The additional revenues may be used to retain qualified staff during low volume periods, so that they will be available when trading volume recovers.

## Fairness

Many securities firms have developed their businesses in a way that is profitable under the fixed rate regime, but that would not be viable in a

price-competitive environment. For example, the business of institutional specialists is built on providing expensive packages of services to institutional clients in return for their highly lucrative trading business. The introduction of competitive rates would lead to a major decline in institutional commission fees. The result would be a rapid fall in the revenue of institutional specialists, forcing them to cut back on the services offered. This would lead in turn to a reduced ability to attract institutional clients. Institutional specialists would, therefore, have great difficulty in surviving unless they rapidly reoriented the operations of their firms - a task which can be very difficult.

The TSE argued that to introduce regulatory changes that turned viable businesses into non-viable businesses would be unfair to the individuals who owned and were employed by these firms. Moreover, the penalty would be an undeserved one, since there was no evidence that the securities industry had earned excessive profits or that its actions had led to major complaints by investors. Given the absence of clear problems with the traditional pricing system, the TSE argued, it would be undesirable to incur the risk that price competition would not operate effectively in the Canadian securities industry.

The TSE also argued that retail clients have traditionally been subsidized by institutional clients. To remove their traditional advantage could be viewed as unfair by retail investors.

## Liquidity

The liquidity of the Canadian capital markets is very important, since it affects the cost of capital of all Canadian businesses that raise investment funds through the capital markets. The TSE argued that fixed rates aid the liquidity of the capital markets by subsidizing research and retail investors.

As mentioned previously, liquidity depends in part on diversity of opinion with respect to the value of particular securities. Diversity of opinion may be encouraged by maintaining a diversity of sources of research information. Hence, subsidizing research may aid market liquidity.

Diversity of opinion is also aided by having a large number of participants in the capital market. To the extent that retail participation is increased by reducing the commission fee differential between retail and



institutional investors, fixing rates may aid liquidity by maintaining high institutional rates relative to those likely to exist in a price-competitive environment. Institutional investors, by virtue of their large volume, pay less, on average, than retail investors on both a cents per share and a percentage of principal value basis.<sup>4</sup> It is generally accepted that this advantage will be increased by the move to competitive rates. In the United States, the effective institutional commission rate was approximately one-half the retail rate on a percentage of principal value basis prior to the introduction of competitive rates. Now, seven years after the introduction of competitive rates, institutional rates are about one-third the retail rates (see Table 14).

If institutional rates decline similarly relative to retail rates in Canada, there is concern that retail investors may be induced to invest through the institutions, rather than directly. This could result in increased institutionalization of the market. Increased institutionalization would result in fewer transactions, since institutions tend to trade in large blocks. If fewer transactions take place, the liquidity of the market could be hurt.

The exchange also warned that the introduction of competitive rates could lead to the disappearance of some securities dealers. If some of those affected are market makers, then a continuous market in certain stocks may not be maintained as effectively as it is currently. Liquidity could suffer as a result.

The previous chapter outlined the main arguments of each side in the unfixing debate without comment or evaluation. This chapter provides an analysis of the arguments.

The issues raised by both sides of the unfixing debate relate to the efficiency of the securities market and ultimately to the efficiency of the Canadian capital market. The first section below discusses market efficiency in the context of the securities industry. The next three sections deal with the related issues of concentration and diversification in the securities industry, the stability of the industry, and subsidization. These sections are followed by discussions of liquidity, which is the primary link to the industry's role in maintaining the efficiency of the Canadian capital market. A final section summarizes both the arguments for and against unfixing and the conclusions of the analysis.

### Market efficiency

The analytic argument demonstrating that competition maximizes joint producer and consumer welfare (maximizes market efficiency) may be found in any introductory economics textbook. Essentially, competition provides a combination of incentive and discipline to ensure that all producers are reasonably efficient and that production is not carried out if the cost of production exceeds the value of the output to consumers. In the absence of specific market failure no alternative market structure, including regulation, matches the efficiency and overall welfare level of competition, unless it successfully and costlessly simulates the competitive market structure. In order to understand the effects of alternative market structures (price competition versus regulation), it is useful to compare the way in which any firm likes to price its output with the way in which

price competition alters its actual pricing behaviour. This involves considering competition from a somewhat different perspective than that normally provided in basic textbooks.

In any industry, total industry profits are maximized if all firms cooperate to set what may be termed the optimal cartel price. The only limitation on the cartel price is that eventually, if the price is raised beyond the optimal cartel price, total sales decline enough to offset the increased per unit net revenue resulting from further price increases. More precisely, if price is increased, total revenue declines by more than costs decline. Costs decline because less is sold at a higher price.

Figure 1 illustrates the cartel price situation using conventional economic theory. The demand curve (DD) represents the quantity that can be sold at any given price. The marginal cost curve (MC) represents the cost of additional industry production. The marginal revenue (MR) represents that additional revenue earned if the price is lowered so that the quantity demanded increases. Industry profit is maximized at output quantity ( $Q_c$ ) such that the marginal cost just equals the marginal revenue. The optimal quantity can be sold at a price ( $P_c$ ) as shown. The price is the same as the price that would be set by a monopolist with the same marginal cost curve and facing the same demand. If the price is lowered below  $P_c$  to increase sales, the additional revenue will be less than the additional cost; hence, total industry profit will decline.

Generally, the cartel price is above the price justified by the industry's economic costs;<sup>1</sup> hence, cartel pricing is viewed as being contrary to the public interest. If there is only one firm in the industry (a monopoly), the only way to hold the price down to a level that reflects costs is to regulate the monopolist. In industries with more than one firm, price competition keeps the price level down unless there are restrictions on competition. The mechanism by which competition lowers the price is quite simple.

In an industry with several competing firms, the cartel price maximizes total industry profits but not each firm's profit. As can be seen in Figure 1, at the cartel price and quantity price exceeds the cost of additional output. Each firm can increase its own profit at the expense of its competitors by expanding production and cutting price in order to increase its share of the market. Even if the total sales of the industry do not increase, a single firm can greatly increase its own sales by price cutting. In technical terms, the elasticity of demand for the output of

each firm individually is much greater than the elasticity of demand for the industry as a whole. When one firm cuts its price, however, others respond by price cutting to protect their market share. This process continues until further price cutting would lead to an unacceptable level of profits. In this manner, competition for market share drives prices down to a level at which firms do not earn excessive profits.

Even if the firms in an industry resist the temptation to seek increased market share by price cutting, new entrants are likely to drive prices down. When prices are held at the cartel price level, profits are high. This situation attracts new entrants to the industry. The new entrants are likely to underprice the established firms, eroding the market share of the older firms until they respond. Again, prices are driven down to the competitive level - a level at which firms earn only a normal profit.

This competitive activity also has the effect of adjusting industry capacity to the quantity demand for the industry's product (e.g., brokerage services). If the capacity is insufficient, prices and profits tend to rise until they attract new entrants or additional capital for expansion of existing firms. Similarly, if demand declines, competition stiffens; prices and profits decline until a few firms leave or contract. This eliminates excess capacity. If a cartel (or regulation) restricts this price movement, needed adjustments will be inhibited.

The cartel price can be sustained only if competitive forces can be restricted. The two aspects of competition that must be restricted are price cutting by members of the cartel and entry into the industry of new firms that may underprice the cartel.<sup>2</sup>

In the rare situations where the restrictive conditions necessary to sustain cartel prices exist, it is in the public interest for the government or a regulatory agency to intervene either to remove the restrictions, allowing normal competitive forces to operate, or to regulate price in the industry. The appropriate approach depends on whether it is feasible to remove the restrictions and on whether the restrictions are required in order to achieve some objective other than competitive price setting that is in the public interest.

The basic approach in Canada is to foster competition. Thus, the Combines Investigation Act outlaws industry practices that restrict competition, such as collaborating to fix prices or engaging in predatory pricing to discourage new entrants. Prior to unfixing, however, the securities

industry was protected from prosecution under the Combines Investigation Act, since its price-fixing activities were approved by the Ontario Securities Commission (or its counterparts in other provinces). Since the industry was allowed to fix prices, it was necessary to regulate those prices in order to protect the public interest. The objective of price regulation was to ensure that the TSE's fixed prices were not raised to the cartel price level. By removing the protective umbrella, the OSC has demonstrated that, given the environment of the securities industry, it considers price competition to be a more efficient and equitable pricing mechanism than the traditional regulated fixed-price system.

The TSE illustrates the conditions required for an effective cartel quite well. It has successfully maintained fixed rates throughout most of its history, as have the other Canadian exchanges, the New York Stock Exchange (prior to being forced to unfix rates in 1975), and many other exchanges around the world. Fixed prices have been sustainable because of certain unique characteristics of stock exchanges. In most other industries, attempts to set up cartels have not been sustainable.

Although the securities industry as a whole is highly competitive - there are over 80 firms competing for the business of people wishing to trade TSE stocks - the specific activities of the TSE are subject to the decreasing cost characteristics of a natural monopoly. In other words, the services provided by the exchange are more economically provided by a single exchange than they would be by two or more exchanges. What is more important, the capital market is best serviced by a single exchange.

The purpose of a stock exchange is to provide liquidity to the secondary market. In the absence of any exchange, individual investors would have difficulty finding buyers for shares they wished to sell. A stock exchange provides a single location where buyers and sellers (represented by their brokers) can come together to trade. By making it easier to complete transactions (match buyers and sellers), the exchange maximizes liquidity and stabilizes stock prices. In the terminology of economics, transactions costs and liquidity risks are minimized when trading is consolidated. If two or more exchanges existed in competition with each other, it is quite possible that trading on the two exchanges would occur at different prices at the same time, although due to arbitrage activities, the differences would normally be small. More important, market liquidity would be reduced, since each exchange would have less turnover (depth) than a single exchange. Furthermore, operating an exchange involves



large fixed costs: new and relatively small exchanges cannot compete profitably with established exchanges.

For these reasons, stock exchanges operate on a monopolistic basis. Access to the exchange floor is generally required for completion of transactions in listed securities and most securities are listed on only one exchange. Thus, the exchange has ultimate control over virtually all trading.<sup>3</sup>

This market structure is comparable to the telephone industry, where the switching network is a natural monopoly but there is no natural monopoly in terminal equipment.<sup>4</sup> The exchange embodies a degree of monopoly power similar to that of the telephone switching network, while brokerage firms operate in the equivalent to the telephone terminal market. However, the securities industry differs from the telecommunications industry in that prices are set by the non-monopolistic end of the market. It is the brokerage firms that own, and therefore control, the exchange.

Since the TSE is owned and operated by its members, those members in effect have monopoly control over the primary means of trading securities. They also have the power to control entry into the industry and effective disciplinary control over individual members, who must comply with the rules of the exchange or risk losing access to the trading floor.<sup>5</sup> Of course, the monopoly power of the TSE is restrained by the OSC. The TSE can restrict membership and maintain fixed prices only to the extent that it is permitted by the OSC, which has the power to outlaw any exchange bylaws that unduly restrict competition.

Nevertheless, the inherent structure of the exchange is potentially consistent with the previously stated requirements of a viable cartel if the exchange is allowed to fix prices. If there were no regulatory restrictions, the industry would be able to hold prices above the normal competitive price level without fear of price cutting by any members and without the threat of competition from new entrants. It is this aspect of the structure of the securities industry that forms the basis of the argument of the proponents of competitive rates. If neither the discipline of competitive rates nor the discipline of price regulation exists, commission fees are likely to be excessive.

The earlier discussion of cartel pricing explains why it is normally considered contrary to the public interest to allow any industry association, including the TSE, to fix rates freely. It does not explain why regulators are at a distinct disadvantage relative to the competitive market

mechanism in setting the price that best serves the public interest. A closer examination of the implications of regulation is required to demonstrate the advantages of competition.

As detailed above, unrestricted price competition drives the price down to a level at which members of an industry earn a fair, or normal, return. Any price below that level results in firms receiving an inadequate return on investment and cutting costs to the point where they cannot provide as high a level of service as the market is willing to pay for. Any price above the competitive equilibrium results in either excessive profits to the industry or excessive service inflation.

Although there are market failures such as public goods, externalities, misperception, etc., that can cause the competitive equilibrium to be inappropriate, there is no evidence that these special situations are present in the securities industry. Even if they were, regulation would not be justified unless the costs of regulation were less than the costs of the market failure. Although no market is perfect, neither is regulation ever perfect, or costless.

The greatest cost of regulated, fixed rates is that they generally differ from the competitive price. The OSC, or any other regulator, cannot accurately determine the competitive price in the absence of competition. In the 'classic' case of price regulation - monopoly - price is normally set on the basis of rate of return. Yet, rate of return determination is notoriously problematic in the case of monopolies and far more problematic in the case of non-monopolistic industries. Even if the regulated industry is not earning an excessive profit (assuming a fair profit level can be determined), it does not follow that the price level corresponds to the competitive price, since non-price competition can be expected to reduce profits to the normal competitive equilibrium profit level for any price above the competitive equilibrium level. Although restrictions on price and entry are sufficient to sustain cartel prices, non-price competition must also be restricted in order to sustain cartel profits.

In the absence of restrictions on non-price competition, firms are likely to attempt to expand their market share by increasing the services offered for the fixed prices or by offering other enticements. In other words, firms will forgo some of the profit on individual transactions in order to increase their volume of business. Once one firm offers an 'extra', others respond with their own 'extras'. Firms can be expected to engage in this non-price competition, which inflates their costs, until they

cannot afford to provide any more 'extras'. Consequently, when prices are fixed, the absence of excessive profits does not indicate that prices are not excessive. It is quite possible that prices are high, but that the potentially high profits are dissipated as firms provide services that their clients would not buy if they were offered at cost (rather than being 'free'). A regulator cannot tell whether the level of services provided reflects market demand or not. The only true test is to allow the market to choose among service levels by allowing variation in price, and this requires unfixing rates and allowing firms to compete on the basis of price and service alike. When price is regulated, service competition operates alone. But service competition alone, although it may keep profit levels from becoming excessive, is no substitute for price competition in terms of restraining the price level.

Despite its potential effect on profitability, non-price (service) competition is likely to be more attractive to firms than price competition, since it is harder for consumers (i.e., investors) to evaluate service than it is for them to evaluate price. Price comparisons are very simple and anyone who is charging an excessive price is easily identified. But it can be very difficult to differentiate between a firm that provides inferior (lower cost) service and a firm that provides superior (more costly) service. As a result, a securities dealer is less likely to lose customers to competitors when price competition is restricted. Many businessmen would find this situation attractive.

There is also less pressure to be cost-conscious in an environment of service competition without price competition. Indeed, it may be possible to use the low profits resulting from the high costs of service competition to justify a rate increase. This is particularly likely to happen in an industry such as the brokerage industry, where business volume is volatile. When activity is high, revenues and profits are high and firms are likely to expand their services, thereby increasing costs, as they compete for business. When market activity slows down, they must either cut costs or propose an increase in rates that may appear to be justified by low profits. The normal discipline provided by price competition to rationalize services and rates is absent; hence, prices keep rising and costs chase after them. The result can be extreme inefficiency relative to the price-service combinations investors would choose in a competitive environment, with no means of identifying whether inefficiency exists or not.

The industry as a whole is likely to be content with this process

since, as services inflate, the industry grows. Few businessmen object to growth. Unfortunately, growth is achieved by giving investors no choice except to purchase a high-service product, even if they consider many of the services to have little value.

The loss of diversity in the price-service options available to consumers is another major cost of fixed prices. In most competitive industries, consumers have a range of product choices, from a luxury product at a high price, to a 'no-frills' product at a low price. When prices are fixed, there is only one price level and one level of service. The service package itself may be quite varied, but the level of service does not vary. Due to the service competition, consumers cannot get a 'no-frills' service package even if they would gladly forgo the extra services in return for the option of paying a lower fee. When brokerage fees were regulated, no brokers charged above the fixed (minimum) commission, although selling a higher-priced product was permitted. Clearly there was virtually no demand for a higher level of service than was offered.

It is interesting to note that one area of TSE regulations was aimed at restricting service competition with fixed rates. There were strict controls on 'soft dollar' transactions, greatly limiting what brokers could offer their clients in return for their business. These rules slowed down the process of service inflation and the consequent dissipation of cartel profits. Nevertheless, the variety of services allowed was sufficient to ensure the operation of the service inflation mechanism.

Even if service levels could be rationalized and if TSE members were not allowed to invoke seat values as a self-fulfilling justification for high commission rates,<sup>6</sup> the OSC would still be faced with the task of determining an appropriate cost basis for rate setting. This task is difficult in any regulated environment, but it is particularly so in the brokerage industry. The many reasons for this difficulty include:

- the difficulty of defining the appropriate basis for rate setting;
- the difficulty of defining an appropriate rate of return;
- the absence of a 'correct' allocation of overhead;
- difficulties in obtaining timely data;
- the heterogeneity of the marketplace;
- the high cost of information.

The basis for rate setting in the brokerage industry is very unclear.



What level of services is appropriate for investors to pay for through their commission fees? There is no correct answer to this without a market determination that allows people to choose between different levels of services at corresponding prices. When price is regulated, the wishes of the marketplace cannot be determined.

Quite apart from the need to determine the desired level of service, it is necessary to determine prices that enable firms to earn a fair rate of return. But unless service competition can be effectively restricted, attempts to set a rate of return will be hopeless. Whatever price is set, service competition will inflate costs until the competitive return is being earned. As explained above, however, a competitive return does not imply that prices reflect the competitive level. Thus, determining the appropriate rate of return does not help in price setting - even if an appropriate rate can be set (that is, a rate producing a risk-adjusted return sufficient to attract capital into the industry).

For the same reason, regulators find it extremely difficult to determine whether an industry is operating efficiently or not. Consequently, prices tend to reflect the average costs of the industry - even if it is operating inefficiently. There is no market discipline to force firms to be efficient.

Collecting and interpreting useful cost data is also difficult. Many costs of brokerage firms are overhead costs jointly attributable to a range of activities. Determining the cost and consequently the profitability of a particular activity, such as the execution of equity trading on the exchange, is impossible since there is no 'current' allocation. As a result, it is likewise impossible to determine an appropriate price for that activity. Since the allocation is arbitrary, measuring profitability on this basis provides an incentive to firms to load an excessive proportion of overhead costs onto the regulated service for rate-setting purposes in order to justify a higher price for that service. The only meaningful basis for measuring profitability for rate-setting purposes is the firm as a whole.

Even if the regulator is successful in determining the appropriate price, conditions change constantly, requiring price adjustments. In a competitive market, price changes can occur rapidly. In a regulated market, serious delays are normally introduced by the regulatory process. Firms are unlikely to suffer seriously if fixed minimum rates lag behind costs, since they are free to charge prices above the schedule. But if costs decline - due to significant technological innovations, for example -



the delay in any downward movement in price is likely to be lengthy. There is no regulatory mechanism for reviewing the price schedule if it is excessively high. Changes are initiated by the TSE, which is unlikely to take action unless it seeks an increase in rates (except when it feels threatened by competition from other exchanges).

Even if industry costs could be accurately determined, they would not be representative of individual firms. The securities industry is very heterogeneous: different firms have different mixes of revenue sources and different mixes of clientele. Any particular price schedule is likely to increase the profitability of specific types of firms and make specific types of clients (e.g., institutions) more attractive than others. The result is likely to be that some clients are better served than others. Also, some firms are likely to be more profitable than others due to the fixed rate structure, rather than due to their own efficiency or other good business practices.

Finally, there is no obvious rationale for incurring the administrative and compliance costs of regulation if the price sought by regulators is just the market price.

Perhaps the most damning feature of price regulation is that it can be the most effective way to sustain a cartel. For this reason, price regulation can be very attractive to producers as long as its objective is not to hold prices below the competitive market level. Although the service inflation that accompanies price regulation tends to reduce the potential for excess profits, regulation can bring other benefits. New firms usually break into a market by offering lower prices than established firms, even if this requires the newcomer to accept low profits initially. With fixed prices, new firms cannot underprice established firms; hence, the market position of established firms is more secure.

In addition, if profits are low, a regulated industry can generally count on receiving a price increase sufficient to ensure adequate profitability. On the other hand, if profits rise, regulatory mechanisms do not usually lower prices and there is no danger that price competition will reduce price levels and profits.

A further concern is that regulators often set prices above the competitive level. If regulated prices are below the competitive level, industry profitability will be inadequate. Firms may leave the industry either by choice or default; hence, supply shortages are likely to result. Given this danger, regulators tend to prices a little higher than required, since high

prices, while as inefficient as low prices, are less obviously disruptive to the marketplace - the public complains less about an oversupply than about an undersupply.

The optimal regulated price is the competitive market price - unless the objective of price regulation is something other than economic efficiency and a price level that fairly compensates producers without being excessive. For example, if the intent is to subsidize producers, then the desired regulated price will be above the competitive level. In the absence of a rationale for subsidizing producers, the desired rate is the competitive level. Price competition will determine this automatically: hence, regulation is redundant.

In summary, using regulation to achieve the market price is costly relative to letting market forces do the job. Not only is there a risk of the price level being set too high or too low by mistake, but there are administrative costs to the regulatory process for the regulators, producers, and intervenors (if there are any). These costs are largely passed on to consumers and taxpayers generally. Indeed, the regulatory process typically facilitates the passing on of even that portion of (compliance) costs that would be absorbed by the industry in an unregulated environment. In addition, depending on the rules for price determination, regulation may decrease the incentive for producer efficiency, maintain excessive capacity, and decrease product variety. Price regulation, therefore, is detrimental to consumer welfare unless it can be shown that competition is restricted and that the impediments to competition cannot be removed by any means more efficient than price regulation.

The evidence suggests that the only impediment to effective price competition is price regulation itself. For this reason, there is nothing to be gained by price regulation but much to lose. Even if profits are not excessive in a regulated regime, there is no assurance that prices are not excessive. Even if prices are not excessive, regulation involves administrative costs and loss of choice, each of which reduces the welfare of investors and society at large.

During the OSC hearings, the TSE argued that despite the potential efficiency problems outlined above, the absence of complaints demonstrated that clients were happy with fixed commission rates and that the system had worked well. It might easily be argued, however, that investors are much more concerned about issues such as proper disclosure than about whether commission rates are fixed or competitive - especially if rates are

not too far out of line. The evidence suggests that rates are close to the competitive level for retail investors. Although they are excessively high for institutional investors, the institutions get preferential treatment as a result. (See the subsidization discussion below.) The absence of complaints tells us nothing about the effect of fixed rates on market efficiency. It only tells us that the efficient pricing of brokerage services is not a major concern to investors. Setting the 'right' brokerage fee is also of minor concern to the OSC, which is why it unfixed rates.

It is also important to note that although fixed rates have not created problems in the past, the same may not hold true for the future. Technological change is rapidly altering the potential for direct international competition between exchanges. With high speed data transmission shrinking telecommunication costs, it may soon be as easy to trade on foreign stock exchanges as on local ones. If industry costs and revenues are not rationalized by competitive forces, the TSE could find itself competing at a disadvantage for the business of Canadians.

Technology has also greatly reduced the administrative costs of executing trades. Some industry insiders foresee the day when execution will be so cheap that it will become the 'free' service.<sup>7</sup> They predict that research and other financial services will be sold either as a package of services or as individual services, with trading tossed in as part of a monthly fee. With trading costs potentially declining rapidly, it would be unrealistic to restrict reductions in the commission fee charged for execution.

It is interesting to note that even within the industry resistance to unfixing declined greatly from 1976 to 1981. Although the industry was nearly unanimous in opposing unfixing in 1976, the industry vote prior to the 1981 hearing showed that the only industry segment that strongly opposed unfixing was the small specialty (institutional) boutiques.

### Concentration and diversification

It is widely accepted that the U.S. securities industry's experience with competitive rates has been quite positive overall. The American experience is an indicator of what to expect from unfixing in Canada; however, it cannot be assumed that the markets are identical. The relevance of the U.S. experience hinges on whether the differences between the U.S. and Canadian industries are sufficient to make competition significantly less

efficient in the Canadian industry than it is in the U.S. industry.

The primary differences are related to the different sizes of the two markets. Because the Canadian market is smaller, both the Canadian securities industry and the Canadian institutional investment community are significantly more concentrated than their American counterparts. The regulatory structure of the Canadian financial industries - particularly banking - makes the relative concentration of Canadian institutional investors even greater. The key question is whether this concentration is sufficient to affect either the competitiveness of the securities industry or the market power of institutional investors.

Virtually every Canadian industry is more concentrated, on the demand side as well as the supply side, than the same industry in the United States. Yet in most industries competition operates effectively in Canada. Although the Canadian institutional market is much more concentrated than the U.S. market, it does not necessarily follow that Canadian institutions have sufficient market power to interfere with the competitive mechanism. With the top fifteen institutions accounting for only 6.5 per cent of total trading (this proportion is declining with time), the brokerage industry faces less concentrated demand than most Canadian wholesale industries.

If institutions do have excessive market power despite this comparative lack of concentration, then they were just as capable of demanding advantageous treatment with respect to service in return for their business when rates were fixed as they are of demanding advantageous commissions now that rates are unfixed. According to the TSE, however, institutions did not utilize service competition to extract unreasonable service concessions; thus, it seems unlikely that they will be able to extract unreasonable price concessions now that rates are unfixed.

Furthermore, the institutions are fully aware that brokers cannot serve them in the long run unless they are fairly compensated for services provided. Brokers will simply turn to providing service to the other 93.5 per cent of the market - retail traders and smaller institutions - if the big fifteen are unwilling to pay reasonable fees. While brokers can be expected to bid the price of institutional trading down significantly, the commission reductions will be matched by cost reductions. Costs can be reduced by reducing the expensive selling effort traditionally used to attract large institutional clients.

The supply side of the market, the securities industry itself, is also



more concentrated than its American equivalent. Nevertheless, the TSE acknowledges that 'the securities industry is currently less highly concentrated than many other Canadian industries'. (TSE 1981, 40) The TSE warns, however, that unfixing may result in a significant increase in concentration. While a slight increase in concentration is quite likely as the TSE adjusts to price competition, the necessary conditions for excessive concentration are not present in the industry. Any permanent increase in concentration will reflect the opportunity unfixing provides to increase industry efficiency. Excessive concentration can only occur if there are significant economies of scale or some other entry barrier. Cost studies of the brokerage industry have consistently shown that economies of scale do not exist in the brokerage industry.<sup>8</sup>

But industry itself provides the best measure of the market power of large firms. Anti-competitive behaviour on the supply side, like the extraction of unreasonable concessions on the demand side, is as easy with service competition as it is with price competition. If large firms can drive out the competition by underpricing the market, they can also drive it out by providing more services than smaller firms can afford. If no such concentration occurred under service competition - and the industry is not excessively concentrated - it is not likely to occur under price competition.

The TSE's related concern that prices will be set by price leadership is nothing more than a 'red herring'. Price leadership is the normal price-setting mechanism in most competitive industries. There is no evidence that price setting in the American brokerage industry is non-competitive, although price leadership does appear to be the mechanism of price movement in that market. The fact that all firms charge very close to the same price does not indicate that they are behaving collusively. With effective price competition, no firm can survive for long if its price is significantly higher than its competitor's; hence, prices will not differ significantly. In addition, when the leader increases its price, all others will follow only if a price increase is truly needed. If the price is excessive, some firms will keep their prices low in an attempt to increase their market shares. The leader will then be forced to cut its price again to avoid losing business to its competitors. Price leadership is a problem only if the leading firms are large enough to absorb any loss of business that results from their competitors' not following their lead. Such is clearly not the case in the Canadian brokerage industry.



The TSE expressed concern during the OSC hearings that the introduction of competitive price setting would lead to diversification of brokers' activities. But unfixing would encourage diversification only if fixed rates maintained the return on investment available to investors in the brokerage industry above the normal return. As we have seen, however, fixed rates do not bring the industry excessive profits; nor would discouragement of diversification be a sufficient justification for their doing so. In fact, significant diversification through holding companies existed prior to unfixing (and without raising any cries of concern), which appears to negate the argument. In any case, diversification stabilizes incomes and, hence, should be beneficial to the industry. Additionally, the issue of diversification is quite distinct from the question of rate fixing, since diversification can be regulated separately. In fact, OSC hearings held in 1982 looked into both diversification and institutional ownership.

Whatever its effect on diversification of industry investment, the introduction of competitive rates will certainly encourage diversification of industry services - a result that can only benefit investors, the industry, and the market alike. For example, the emergence of discount brokers will make 'no frills' executions available at a greatly reduced cost to those investors who consider the research and other brokers' services to be of little or no value.

### Industry stability

The TSE's view that fixed rates increase industry stability rests on the assumption that if rates are held artificially high during periods of low market activity, the additional revenue available to brokerage firms will be used to retain staff who would otherwise leave the industry.

It is to be expected, however, that when profits are low firms will cut costs as much as possible regardless of the commission fee level. Excess staff will be retained to the extent that the cost of retaining their services is expected to be less costly than training new personnel when activity recovered. The optimal approach to retaining staff during inactive periods is unaffected by the commission rate level.

While there is also an affordability aspect to the problem (in terms of cash flow), stability of personnel would be better ensured by a mandatory employment insurance scheme than by fixing prices. Even assuming there

is an intended subsidy inherent in the fixed price schedule, there is no mechanism to ensure that it is used in the intended way.

Additionally, it should be noted that much of the volatility in the industry's income and profits results from factors other than trading volume. Gains/losses on investments, underwriting activity, and the like are also important. Fixing rates cannot help offset these sources of uncertainty.

### Subsidization

Both the proponents and the opponents of price competition agreed during the OSC hearings that in normal circumstances price competition is preferable to price fixing. However, they disagreed on whether or not the brokerage industry is an exception to this general rule. The TSE, in support of the view that the brokerage industry is a special case, argued that a price structure with built-in subsidies is beneficial to the Canadian capital market. In a price-competitive situation subsidization will not occur. If it can be shown that subsidization is beneficial, and that price regulation will achieve the desired subsidization goals, then the TSE's argument is justified. If, however, subsidization is not necessary, or cannot be realized through price regulation, then the basic rationale for price fixing disappears.

The fixed price structure, according to the TSE, promotes two types of subsidies. One is the subsidization of retail investors by institutional investors. The other is the subsidization of research effort. Each of these types is examined below.

#### Subsidization of retail investors

There is nothing inherently desirable in the subsidization of retail investors by institutional investors, although it is tempting to suggest that this type of subsidy is provided to help the 'little guy' by making the 'rich' institutions pay a high fee. This view must be quickly rejected, however, since the true 'little guy' is the investor whose money is being handled by the financial institutions. The average retail investor (an investor who invests directly in the stock market) has much greater wealth than the average person who invests through institutions. Institutions hold the average person's savings in the form of pension funds, insurance, and

bank or trust company savings. This subsidy has merit, therefore, only if it improves the efficiency of the capital market. The TSE argued that subsidizing the retail investor does improve efficiency since, by keeping retail investors in the market, it improves liquidity.

There is no evidence, however, to support the view that a subsidy is required to keep retail investors in the equity market. If a lower unit price to institutions were sufficient to cause retail investors to either transfer their business to the institutions or flee the market completely, this would have happened after the original introduction of a tapered schedule in the early 1960s. Since retail investors did not leave the market then, there is no reason to expect a flight of retail investors after the further decline in institutional rates (which amounts to increase in the effective taper) that will result from unfixing.

The question of whether or not subsidization of retail investors is desirable is unimportant unless it can be shown that price fixing really does result in a subsidy. In fact, there is no reason to believe that a true subsidy does occur, regardless of the fixed price schedule.<sup>9</sup>

A true price subsidy involves one group (institutional investors) paying a fee above the cost of the services provided to them and a second group (retail investors) paying a fee below the cost of the services provided to them. Logic suggests that this situation will not occur, given that brokers are interested in earning profits: if the price charged to retail investors were in fact below the cost of service, then brokers would refuse their business so as to avoid reducing their profits.

Furthermore, in order for the subsidy to take place, it would be necessary for each broker to carry out balanced volumes of institutional and retail business, so that the excess profits on the institutional side counterbalanced the losses on the retail side. Much institutional business, however, goes to institutional specialists. These specialists (there were 22 in 1982) could not have used any excess profits that may have been realized under fixed pricing to subsidize retail business, since they did not have any retail business. On the other hand, there are also firms that deal almost exclusively with retail customers (43 in 1982). Since these firms were able to operate under the fixed-price regime without the supposed source of the subsidy (institutional business), it would appear that the price charged retail investors was sufficient to cover the cost of the services they received. It must be concluded that fixed rates did not result in subsidization of retail investors by institutional investors.

Nevertheless, it is widely accepted that institutional investors paid a commission fee significantly above the competitive price level for them, while retail investors did not pay a fee above the competitive level. If this situation was not subsidization, then what was it? It could be argued that although both retail and institutional customers were serviced at a commission fee above their respective marginal costs, institutional clients carried a larger portion of overhead costs. This would be a subsidy of sorts. Again, however, there is the evidence that firms with a primarily retail clientele operated profitably, indicating that retail rates were sufficient to cover overhead as well as marginal costs.

Clearly, the fixed fee charged retail clients was sufficient to cover the average cost of their business, while the fee charged institutional clients was far in excess of the average fee required to cover their costs in a competitive marketplace. Yet brokerage firms did not earn excessive profits under the fixed price regime. The best explanation of this state of affairs is that service competition for institutional business drove all firms to a level at which profits were not excessive. In other words, because institutional business was much more profitable for a given level of service than retail business, institutional clients got a far higher level of service than did retail clients. The result was not subsidization of retail investors. It was forced subsidization of the provision of services for institutional investors - and perhaps of the brokers themselves.

### Subsidization of research

As was discussed earlier, an argument for fixed rates is that they maintain a subsidy for the production of research - that is, the financial analysis of securities. This argument reflects the traditional characterization within the economic literature of information as a public good. On close examination, however, it is apparent that the standard argument that the production of information must be subsidized in order to achieve an adequate supply does not apply to research in the securities industry.

In general, information is considered a public good because, once produced, it can be consumed by any number of people with virtually no additional cost. Moreover, since it is very difficult to control the dissemination of information, producers are unable to charge all beneficiaries of the information. The rewards to the producer are small relative to the benefit to society; hence, the quantity produced is less than the socially

desirable (efficient) quantity. This logic implies that society is better off if all beneficiaries are 'taxed' to ensure that they pay a fair share for the information they receive. The proceeds can be used to subsidize the production of information in order to realize the optimal level.

While the argument does apply to many types of information, research in the securities industry is not one of them. If capital markets are efficient, new information is quickly capitalized into stock prices. As information on securities spreads to additional investors, its value quickly decreases to zero, whereas information normally has the same value to each person regardless of how many people consume it. In the securities industry, the initial recipients of information must pay for it either in cash or by offering business. The same information is likely to have relatively little value to secondary recipients. There is no evidence that any source of research provides information that is consistently valuable once it is released to the producer's clientele generally.

In fact, there are strong incentives for the securities industry to produce more research than is efficient from society's viewpoint. Research that anticipates price movements can be very valuable; hence the demand for information is high. However, the benefits realized are purely trading gains. One investor gains; another loses. Society as a whole is no better off, since money changing hands in the secondary market has no impact on society's total output. In addition, research information is an important selling tool for brokers. By providing their clients, and the market generally, with lots of information (which can be random as long as it creates diverse expectations), the expectations of investors change and trading is stimulated. Since brokers' incomes depend on trading volume, they have a strong incentive to produce research in order to stimulate demand for their product - executions. Other industries invest in advertising. The securities industry invests in market research.

Research does create a benefit in the form of increased market activity, which can improve liquidity. Improving liquidity can reduce the risk of holding equities and hence the cost of capital. However, the relationship between the cost of capital and research is so remote that it is impossible to determine the optimal level of research. Nevertheless, given the existing incentives to produce research, it is unlikely that it really needs to be subsidized.

Even if a subsidy were needed, holding the commission rate artificially high would not be an efficient way to provide it. Non-price com-



petition would probably ensure that most of the additional funds were used to produce additional services, but much could go to services other than research. If research really did need to be subsidized, it would be much more efficient to place a surcharge on all transactions and create a pool of funds that could be used only for research.

What fixed rates do accomplish is an artificially high level of services. As many sophisticated investors realize, the built-in 'service fee', which fixed rates make compulsory is primarily salesmen's compensation in the case of retail investors and compulsory services in the case of institutional investors. The continued success of full-service brokers in the U.S. since rates were unfixed in 1975 indicates however that many investors want the full package of services that brokers offer. Yet, some investors prefer fewer services and a lower commission fee. Competitive rates make the choice possible.

Institutional investors particularly have been in the position of shopping around for the best package of services, when many of them would prefer to shop for a lower price instead. Given the choice of fewer services and lower fees, some institutions will be able to reduce costs by undertaking their own research. As previously stated, competitive rates will also result in retail clients being as attractive to brokers as institutional clients. Retail clients will no longer have to be content with the 'fallout' from research done for institutions since securities dealers will make a greater effort to also provide research suited to the retail investor's wants. In addition, if the U.S. example is relevant, many of the top analysts who worked for institutional boutiques prior to the introduction of competitive rates will move to diversified firms, where their research will be available to retail as well as institutional investors.

The reorganization of research likely to result from unfixing will probably cause the number of analysts to decline for a short period (until growth in the market offsets the revenue reduction due to lower commission rates). Yet there will still be dozens of independent voices available to provide the diversity of recommendations that the TSE considers so vital to the liquidity of the market.

Finally, price competition is likely to increase the overall quality of research, since investors will only buy the services of brokers who provide more research at higher prices if they find that research worthwhile. Competition will eliminate that which the market does not value and reward the producers of that which the market does value.

## Capital market liquidity

The question of ultimate importance is not how the unfixing of rates will affect the industry or investors, but how it will affect the capital market. Will unfixing affect the ability of business to raise new capital? Will it affect the efficiency of the capital market?

The answers to these questions depend on the effect of unfixing on the efficiency with which information is disseminated to the investing public and on the liquidity of the capital market. As indicated previously, there is no indication that information flows will be adversely affected by the move to competitive rates. In fact, since market analysts are likely to extend their scrutiny to securities that are of little interest to institutional investors, informational efficiency is likely to improve in breadth, if not in depth.

Like informational efficiency, market liquidity affects investor risk. Improving liquidity improves the ease with which investors can sell the securities they hold quickly and at a price that fairly reflects the market valuation of those securities. During the unfixing debate, a number of factors that could affect market liquidity were discussed. They included:

- retail participation,
- research effort,
- selling effort, and
- reduced transaction costs.

Each of these factors is discussed below.

### Retail participation

During the OSC hearings, the TSE argued that introducing competitive rates could lead to increased institutionalization of the Canadian capital market. The result would be decreased liquidity.

A liquid market requires a consistently large and diverse flow of buy and sell orders. While the size of the flow obviously depends on the volume and number of individual transactions, its diversity depends on the number of participants - of individual decision-makers - in the market. It follows that broad retail participation benefits market liquidity.

However, the link between fixed rates and market liquidity suggested

by the TSE is very tenuous. The evidence suggests that the move to competitive rates is more likely to encourage retail participation than discourage it. Although the exchange argued that the anticipated decline in institutional rates, relative to retail rates, is likely to result in decreased retail participation, the concern seems unfounded due to the factors already discussed in the section dealing with subsidization. The relative commission fee is insignificant (even if institutions do pass the saving along to investors) relative to other costs and other reasons for investors choosing to invest directly rather than through institutions.<sup>10</sup> As was discussed earlier, institutions offer a different product than that offered by brokers. The only institutions that come close to being a substitute for direct investment in the stock market are mutual funds. However, the individual investor's choice between a mutual fund and direct investment is based on factors such as whether or not he wants shares in a diversified portfolio and whether or not he wants to make his own investment decisions. Any saving a mutual fund gains through low commission fees will be swamped by its own overhead costs.

If relative commission rates were important to retail participation, there is no reason to believe that their importance would be greater in Canada than in the U.S., where retail participation has actually increased since competitive rates were introduced. Although it can be argued that the increased profitability of retail investors relative to institutional investors leads to greater effort to attract retail clients, there is no clear evidence to support this as the cause of increased retail participation in the U.S. The anticipated development of Canadian discount brokers, similar to those in the U.S., reinforces the view that price competition encourages retail participation. When the discount brokers appear, retail investors will probably be able to cut their brokerage costs by as much as institutions will be able to cut them as a result of the introduction of competitive rates.

The increased differential between retail and institutional brokerage costs that has resulted from the increased taper in the rate schedule since 1977 is as significant as the effects of unfixing are likely to be. There is no evidence that the increased taper hurt liquidity (the TSE expressed no concern); hence, it is not likely that unfixing will hurt liquidity either.

There seems to be little basis for expecting any significant increase in the extent of institutionalization to result from the unfixing of brokerage rates. In the absence of any real threat of increasing institutionalization,

there is no basis for the concern that liquidity will be adversely affected by the introduction of competitive rates.

#### Research effort

If all investors had identical information at all times, and valued all securities identically, trading would occur only when investors wanted to increase or decrease their total investment. Trading that represented portfolio changes rather than increases or decreases in individual investors' holdings would be eliminated, significantly reducing total volume.

It is this diversity of opinion among investors that creates perceived opportunities to trade profitably. The more heterogeneous and volatile are investors' perceptions of the value of securities, the more trading is likely to take place. Since research is intended to provide market information that may change investors' perceptions (by enough to stimulate a trade), it stimulates trading volume. Liquidity is improved by increased trading volume. It follows that any decline in research effort could have a detrimental effect on liquidity. However, the effect of a move to competitive rates on research effort is unlikely to be serious. There is no evidence of a significant decline in research effort in the United States.

In any case, investors rely on many sources of information other than the research provided by securities firms. If the research of brokers declined, other sources would be relied on more heavily. The result could be even greater volatility of investor valuations, which could actually increase liquidity. Furthermore, to the extent that investors have confidence in the research of their brokers, they will be willing to continue to pay for it. In the U.S., discount brokers have been unable to attract more than 10 per cent of the market. The rest of the trading is executed through full-service firms, a circumstance that reflects strong public demand - and willingness to pay - for research and other services provided by securities dealers.

A very important beneficial effect of unfixing, which will tend to aid liquidity, is the increased relative attractiveness of retail investors. With the introduction of competitive rates, institutional rates will no longer be high enough to justify the concentration of research on the few securities that trade in large enough volumes to be of interest to institutions. It can be expected that research, which securities firms produce as a means

of attracting business, will be more frequently produced with the retail investor in mind. Retail investors will be better served, and given better service they will be more likely to participate in the market. Increased retail participation, as the exchange argues, is likely to improve liquidity.

Furthermore, to the extent that less research is carried out specifically to serve institutional investors, it will be replaced by in-house institutional research. The move to competitive rates will not reduce the institutions' need for research. A survey carried out by the TSE and provided to the OSC shows that institutions value research (TSE 1981, Appendix C). If they do not get it from brokers, they will produce it themselves. Artificial 'subsidies' would not be needed even if they were effective.

### Selling effort

The primary function of research, and of other services of securities dealers, is to attract or generate business. Research in particular is useful to brokers as a selling tool. Brokers contact clients to give them buy and sell recommendations, based on the firm's research, in the hope that the clients will take their advice. Thus, the cost of research is a direct investment in a tool that increases commission revenue. Given the payoff for research effort, it is as unlikely that the securities industry will cut back on research as it is that the beer industry will cut back on advertising.

Money had never been spent on research as a public service. Research is a necessary business cost for any broker dealing with retail clients.

### Reduced transaction costs

It may be argued that to the extent that transaction costs are reduced, trading will be stimulated. This view would be consistent with the conventional view of the demand for all normal goods or services. In the case of securities trading, however, there is no clear evidence that trading volume is sensitive to the commission fee. Other factors related to the perceived value of securities likely dominate.

However, to the extent that there may be some price elasticity of demand, competitive rates should increase the frequency of trading of



those investors who realize lower commission fees (large value investors). Increased turnover will improve liquidity.

## Conclusions

The advocates of competitive and fixed rates started from virtually identical premises. They diverged primarily in their views as to whether the effects of unfixing serve the public interest or are in conflict with it.

Both sides agreed that, in general, competitive rate setting is preferable to price fixing and that prices should be fixed only if doing so is in the public interest. The competition lobby, however, held the view that the continuance of fixed commission rates could be justified only if there was clear evidence that competition was not in the public interest. The fixed price lobby held the view that no change should be made unless it could be shown that fixed rates were contrary to the public interest. The latter view was based on the argument that there are risks involved in any change; hence, change should be undertaken only if there is a serious problem with the status quo.

Both sides agreed that the brokerage industry is highly competitive. The competition lobby argued that if competition occurs only on the basis of non-price factors, serious inefficiencies inevitably result. The fixed-rate lobby argued that price competition is not necessary if other forms of competition exist.

Both sides agreed that under the most recent fixed rate schedule retail rates were probably close to the competitive level, while institutional rates were substantially above the competitive level. The competition lobby considered this arrangement to be a source of serious inefficiencies. The fixed-rate lobby considered these price effects to be important to the maintenance of a healthy financial market.

Both sides agreed that with the introduction of competitive rates total industry revenues would decline. They agreed that the industry would have to respond to unfixing by reducing costs, probably by cutting back on some services. The competition lobby considered such cutbacks an elimination of inefficiencies (services that cost more than their value to investors). The fixed-rate lobby considered the services to be valuable to the efficiency and liquidity of the marketplace and, hence, deserving of forced subsidization.

Both sides agreed that the introduction of competitive rates would

threaten the viability of some brokerage firms. The competition lobby took the view that the introduction of competitive rates would most hurt those firms that depended most heavily on artificial demand (for institutional specialty services) created by the fixed-rate schedule. The fixed-rate lobby felt that these firms provided a valuable (even if subsidized) service. Furthermore, they viewed it as unjust that some firms should suffer due to a change in the rules.

Observation and analysis of the U.S. experience can be used to clarify the differences in viewpoint. The U.S. experience is relevant because the Canadian industry at the present time and the U.S. industry in the early 1970s are not sufficiently dissimilar in terms of breadth and depth of the market, volume, production of services, etc. to suggest that the effects of unfixing in Canada will be significantly different from those observed in the U.S.

The evidence supports the expectation that many of the benefits of price competition that were realized in the U.S. will also be realized in Canada. It strongly suggests that investors will save substantially on fees for large transactions, while the fees for small transactions will increase only slightly, if at all. Overall, investors can expect to realize a significant saving.

The evidence on the issue of subsidization demonstrates not only that there is no mechanism for the subsidy to operate effectively, but that eliminating the comparatively high profitability of large transactions will increase the attractiveness to brokers of retail investors. This change can be expected to provide an incentive for brokers to direct more of their research efforts and other services to the retail market, which is less able than the institutional market to satisfy its own research needs. As a result, retail participation in the equity market should increase, aiding the liquidity of the market.

With respect to research, the evidence already summarized supports not only the expectation that it will be made both more available and more relevant to the retail investor but also that it will be rationalized in the sense that research that the market does not value will be eliminated in favour of a reduction in the cost of trading.

To the extent that competitive rate setting will encourage brokers to diversify outside of brokerage activities, competition will benefit, not hurt, the industry and the financial market. Such diversification will help stabilize overall profits while it expands the resources available to firms to

draw on in order to meet underwriting needs.

As a result of the unfixing of rates, the Ontario Securities Commission will no longer be burdened with the time-consuming task of trying to ascertain whether the rate schedules proposed by the TSE are fair. The exchange will be saved the expense and effort of justifying each change in rates. Instead, competitive pressures will discipline each firm within the industry to charge a fair rate. Any firm, including a so-called 'price leader', that raises prices too high will find that other firms can profitably underprice it and expand their market share at the 'leader's' expense. Normal competitive market discipline will ensure that no firm charges unreasonable rates.

In addition, there will be diversity in prices. Firms that are perceived to provide better service, whether it be more valuable research or faster execution, will be able to charge more to those investors who desire premium service. Conversely, discount brokers will emerge to cater to those investors who seek low-cost, no-frills execution.

It is particularly advantageous to allow rates to be set competitively when the difficulty determining appropriate fixed rates is considered. While accountants can come up with an allocation of costs that is consistent with 'generally accepted accounting principles' for purposes such as the TSE Cost Study, the allocation is inevitably arbitrary and void of true economic significance. Therefore, despite the availability of the TSE Cost Study and RAMA, there is no totally objective data on costs or profitability on which to base rate decisions.

The TSE acknowledges that 'return on the capital invested may not be the best measure of profitability' (TSE 1981, 29), but offers no alternative basis for determining rates. A major cause of the problem is that when profitability is low, there is no way to determine whether firms are operating inefficiently and should not be granted an increase in rates, whether firms are providing excessive services (i.e., services that investors consider to be of less value than their cost of production), or whether revenue is truly inadequate.

In addition to avoiding the cost and inevitable errors of rate-setting (rates could be set either too high or too low), unfixing rates will allow market commission rates to respond quickly to changing conditions. As costs rise or fall, so will commission rates. If rates are fixed, rate increases must await the regulatory process. Furthermore, no mechanism now exists to reduce rates if cost should fall (due to technological ad-

vances, for example) sufficiently to warrant a rate reduction.

Finally, as technology lowers the barriers to the internationalization of securities markets, a brokerage industry that is used to dealing with price competition domestically will be better equipped to deal with price competition internationally. For this reason, as well as for reasons of flexibility, a price-competitive industry promises to be stronger than a price-fixing industry when faced with the increasing pressure from international competition that is expected over the next two decades.

In the United States, competitively determined stock brokerage fees replaced the traditional fixed-price schedule as of 1 May 1975. As has been the case in Canada, the industry had fought a losing battle to retain fixed commission rates by warning that to embark on the unknown waters of price competition could result in consequences damaging to the financial market.

In two documents published in the late 1960s (NYSE 1968 and 1969), the NYSE argued that competitive rates would lead to bankruptcy for many firms, destructive competition (because of the peculiar cost structure of the industry<sup>1</sup>), and increased off-board trading.<sup>2</sup> The NYSE also foresaw institutionalization's forcing small firms into bankruptcy and a decline in the quality of the market.

A number of economists challenged the NYSE's assertions (Mann 1970, Tinic and West 1971, Baxter 1970). Some authors concentrated on specific aspects underlying the NYSE's argument. Friend and Blume (1973) analyzed the argument that the cost structure of the brokerage industry provided a rationale for regulation on the grounds that the industry was a natural monopoly. They did not expect that competitive rates would appreciably increase concentration in the brokerage industry. Mann (1970) came to the same conclusion, as did Baxter (1970), who also addressed the question of exchange membership and concluded that the NYSE's assertion that increased off-board trading would result was not borne out by the evidence.

Eight years after rates were unfixed in the U.S., the weight of experience appears to support the proponents of competitive rates. The fears of the NYSE seem to have been totally unfounded.

The important effects of unfixing in the U.S. can be conveniently dealt with under five headings:



- commisson rates;
- concentration;
- profitability;
- market liquidity;
- research.

Each of these topics is discussed below.

### Commission rates

After rates were unfixed on the NYSE, the effective commission rate for institutions, as a percentage of principal value or on a cents per share basis, declined for all order sizes. A comparison of the fourth quarter of 1980 with April 1975 shows a decline in rates ranging from 20 per cent for trades of less than 200 shares to over 50 per cent for trades of more than 10,000 shares. The effective commission rate for large trades by individuals also declined (over 50 per cent on a cents per share basis and 30 per cent as a percentage of principal value for trades of 10,000 shares or more). However, the effect of unfixing on rates for small trades by individuals was ambiguous. Specifically, the effective commission rate for trades of less than 200 shares increased by almost 20 per cent on a cents per share basis but decreased by 6 per cent as a percentage of principal value (SEC 1981, 97-101). Nevertheless, two conclusions are clear.

First, the overall effective commission rate for all trades declined by over 15 per cent for individuals and more than 50 per cent for institutions, using either measure. Figure 2 shows the overall effects. Individual commissions declined 19.6 per cent as a percentage of principal value and 15.7 per cent on a cents per share basis. Institutional rates declined 57.1 per cent as a percentage of principal value and 54.2 per cent on a cents per share basis.

Second, it seems fair to conclude that for large trades the effective commission rate for both individual and institutional investors fell by about 50 per cent, while for small trades there was a relatively small saving for institutional investors and a small change, the direction of which is unclear, for individual investors. This conclusion takes into consideration the fact that with the commission schedule held constant the general increase in share values and order sizes since 1975 would tend to bias these measures by increasing the effective commission rate measured in

cents per share while decreasing it when measured as a percentage of principal value.

Figure 3 shows the change in commission rates relative to principal value and share volume. It is apparent that costs have risen for the smallest trades for individuals (under \$2,000 and under 1,000 shares) and fallen for all transaction sizes for institutions. The 1980 commissions for individuals and institutions are compared in Figure 4. It is evident that as the order size increases the difference between institutional and individual costs narrows. Individual costs on a cents per share basis actually fall below institutional costs. The reason for the lower individual cost, of course, is the lower average share price for individuals.

The cost comparisons provided by the U.S. Securities and Exchange Commission tell us much about the effects of unfixing. As previously mentioned, however, it must be noted that the data provided are affected by differences in average share prices and average size of trade. In addition, comparisons of current commissions with the fixed rate schedule make no allowance for the possibility that the fixed schedule would have been increased if it had been kept.

There is no evidence to suggest that the decline in institutional rates reflects the power of institutions to demand services at unprofitably low rates or any other anti-competitive market forces. Prices have fallen because the old fixed rate schedule did not reflect the cost of doing business.<sup>3</sup> Although there is no evidence that profits were excessive in the brokerage industry prior to 1975, prices have fallen significantly since unfixing while profits have been maintained (see below).

It has been argued (SIA, 1980) that the SEC's estimates of the decline in brokerage fees overstate the true case, since average share prices and average order sizes have been declining since 1975. While it is true that these factors would have lowered the average cost of trading under the old fixed rate schedule, it should also be noted that there is no guarantee that the American exchanges would not have increased the fixed schedule if it had been left in place.

Although it is possible to quibble over the magnitude of the savings resulting from the introduction of competitive rates, it is clear that a saving has been realized and that saving increases with order size. Furthermore, since the SEC data does not include discount brokers, it is clear that small investors who choose the discount option realize significant savings, although the average cost of small trades has not declined.

It is also apparent from the data on commission rates that it took almost three years for the market to find its equilibrium. Prices did not jump down to the lower level instantaneously. They declined gradually as competition forced brokers to cut costs further and further in order to retain their clientele.

### Concentration

The U.S. Securities and Exchange Commission reports that the concentration of the U.S. industry increased after 1975. As Table 29 shows, the total revenue of the top 25 firms increased from 53 to 61 per cent of industry revenue between 1975 and 1980. In the same period, equity capital of the top 25 rose from 46 to 49 per cent and assets rose from 69 to 77 per cent of industry totals. It is not clear, however, that the increased concentration can be attributed to the unfixing of rates; a trend to increased concentration was evident prior to 1975 as well. Between 1971 and 1975, total revenue of the top 25 firms increased from 44 to 53 per cent, equity capital from 44 to 46 per cent, and assets from 56 to 69 per cent of industry totals. The rate of increase in concentration did not increase after 1975.

The SEC also reports on the degree of concentration among the top 4, 8, and 16 firms. The data is reproduced in Table 29.

Table 30 derives the corresponding data for each group of firms (top 4, firms 5 through 8, firms 9 through 16, and firms 17 through 25). These data show that firms 5 through 8 (not necessarily the same firms in 1980 as in 1975 or 1971) grew the most. They also show (see Table 31) that in 1980 the ratio of the share of pre-tax income to the share of total revenue was 0.85 for the top 25 firms (1.0 for the top 4, with other top groups less than one). The ratio for all groups of the top 25 fell between 1971 and 1980 and it fell for all groups of the top 16 between 1975 and 1980.

In other words, firms not in the top 25 earned significantly more pre-tax income as a percentage of revenue than did the top 25 firms. Small firms also earned much higher pre-tax income relative to assets than did the top 25 firms. The performance of the small firms increased from 1971 to 1975 and again to 1980, relative to the top 25.

However, the lower equity to asset ratio of the large firms caused them to have a higher ratio of pre-tax income to equity capital. Small

firms did outperform firms 17-25 even on this measure, although the three top groups showed ratios that increased with firm size. The top eight firms had an above-average return on equity, and smaller firms had below-average return on equity.

It is evident that the consolidation that occurred from 1975 through 1980 cannot be attributed to any economies of scale that the large firms in the U.S. industry might have exploited since rates were unfixed. On average, profit margins and return on assets were higher for small firms than for large. In 1975 and 1980, both relatively profitable years for the U.S. industry, return on equity was higher for the large firms; however, in the absence of data for the intervening years (the SEC did not report it), it would appear that the higher leverage of the large firms was a source of their high return on equity in the good years. A longer-term average would be expected to show results more consistent with the 1971 data and other studies<sup>4</sup> - there is no clear relationship between firm size and return on equity. Consequently, there is no reason for price competition to be a contributing factor in increased concentration. It has been suggested that increased concentration in the U.S. securities industry primarily reflects the efforts of individual firms to diversify in order to achieve greater protection from the effects of stock-market cycles (Eisenach and Miller 1981).

Although the SEC's 1980 report came to the conclusion that there is no evidence of increased concentration, agreement is not universal. The Securities Industry Association suggested that the sharp trend toward concentration in 1973 and 1974 was caused by poor market conditions and would have been reversed during the high volume years of 1975 and 1976, had it not been for the unfixing of commission rates. Nevertheless, the fact that the top 25 firms still only accounted for 67 per cent of industry capital in 1978 stresses the fact that the industry is less rather than more concentrated than other industries (SEC 1980).

Consideration of exchange membership also yields results that indicate that price competition has not led to increased concentration. Between May 1975 and December 1977, 69 member firms of the NYSE discontinued business, 36 of them because of mergers. In the same time, however, 49 new firms joined the exchange (SEC 1978).

The extent of movement in the rankings of firms within the industry provides some evidence that the growth rates of several smaller firms are outpacing the growth rates of the industry leaders, a factor that acts as a

brake on concentration. Of the top ten firms identified in 1972, three had been replaced by 1978. Their places had been taken by firms whose 1972 rankings were eighteenth, twenty-first, and twenty-second. In addition, the second largest firm in 1972 had fallen to fifth in 1978 (Tinic and West 1980, 34).

It should also be pointed out that although full-service firms have made substantial gains in their share of the commission business, so have regional firms, which do primarily an agency business. In addition, discount brokers have shown above-average earnings.

### Profitability

Figure 5 reports on three measures of profitability for the U.S. brokerage industry during the period 1972 through 1980. It is evident that industry profitability was stronger in the late 1970s than earlier in the decade. The NYSE seat value declined until 1977, then rose steadily through 1980 (Table 28).

Pre-tax returns on capital during the years 1972 to 1974 averaged 6 per cent annually. Between 1975 and 1980, this measure of profitability averaged 23.1 per cent annually. However, the earlier low-profit period includes the years 1973 and 1974, when low volume and low stock prices depressed industry revenues; hence, it would appear that the industry's performance primarily reflects market conditions rather than the shift from fixed to competitive commissions.

The SEC argues that the introduction of competitive rates has fundamentally altered the relationship between industry revenues and profits. It suggests that the ability of rates to adjust in order to more accurately reflect marginal costs sheltered the industry in 1977 and mitigated the impact of high volume on revenues in 1978 (SEC 1979a).<sup>5</sup>

The Securities Industry Association agrees that profitability now appears to be less closely linked to changes in volume of business, but credits this to diversification by firms (particularly into principal business) and fluctuations in securities prices in the period studied by the SEC rather than to the introduction of competitive rates (SIA 1979).

In 1979, profits of discount brokerage firms were greater than those of other NYSE brokers. The pre-tax profit margin for discount brokers was 10.5 per cent, compared with 9.8 per cent for all firms. Return on equity was 63 per cent for discount brokers and 30 per cent for all firms (Arnold 1981).



The industry's performance appears to negate its pre-1975 concern that the introduction of price competition would lead to unreasonably low levels of profitability.

### Market liquidity

Early work on the issue of market liquidity indicated that negotiated commission rates for large orders had not had an appreciable impact on market liquidity (NYSE 1972).

Two years after May Day, the SEC reported that:

The introduction of competitive commission rates on May 1, 1975 does not appear to have noticeably affected market quality as measured by price volatility and aggregate liquidity. (Hills 1977, 4)

Liquidity improved from a relatively low level in September 1974 through July 1975. Liquidity declined with the sharp drop in trading volume in August and September, but recovered as trading picked up and was at a level higher at the end of 1975 than in any of the 18 months prior to the unfixing of commission rates. Moreover, despite the tendency toward some increase in volatility early in 1976, market liquidity continued to improve and in December reached the highest level since late 1972. (SEC 1977, 65)

Late in 1981, a commentator noted that 'substantial liquidity' had been created in the stock market since 1975 (Arnold 1981, 6).

### Research

While hard data on trends in the production of research are unavailable, the general impression of commentators seems to be that research has not suffered as a result of the change to a competitive rate structure in the U.S. In fact, it appears that the quality of research has improved since 1975, although it is unclear whether this is the result of competitive rates or the general trends toward improved technology and the emergence of a more sophisticated and demanding marketplace.

However, there does appear to be some movement of research effort from brokerage houses to in-house institutional research departments. Employment of securities analysts by brokerage firms fell between August 1975 and November 1978 by 20 per cent, while employment by institutional investors rose by 11 per cent (SIA 1978).

Even if further information should reveal a decline in total quantity of

research, it would not indicate that a problem had been created. As was discussed previously, competitive prices can be expected to force the rationalization of research within the industry. This would involve less total research only if fixed rates had led to excessive research efforts in the first place (Tinic and West 1980, 39-40).

### Implications for investors

In the past, retail investors had little reason to 'shop' for brokerage services. All firms charged the same price and the services provided by different firms did not vary a great deal. By and large, the choice of brokers depended on convenience and trust. Investors dealt with the broker who they felt could provide the most useful investment information. On this score, the market will not change significantly.

The introduction of competitive rates will result in a number of new opportunities for both retail and institutional investors. Essentially, it will become worthwhile to shop around for a better deal. Of course, where there is a strong relationship between a broker and client based on confidence in the broker's advice, investors are unlikely to be interested in shopping around to save a few dollars in brokerage fees.

Retail investors should not expect to see any significant change in the commission fee charged by full-service firms for orders involving fewer than 1,000 shares. For larger orders, however, cost can be expected to decrease significantly, while the fee for very small orders is likely to increase slightly.

In the U.S., the posted rate for a \$2,000 order is generally about 30 to 40 per cent higher than the rate for a \$10,000 order, as a percentage of value. The rate for a \$40,000 order is about 25 to 30 per cent lower than that for a \$10,000 order. Prior to unfixing, the TSE rate for a \$2,000 order was about 5 per cent above the rate for a \$10,000 order, and the rate for a \$40,000 order was about 10 per cent lower. Since there is no reason to believe that economies of scale for large orders are greater in the U.S. than in Canada, it is reasonable to expect that Canadian brokers will increase the saving on large orders to something closer to the effective U.S. taper.

A more important consideration is that in future the prices quoted by a broker will be a 'posted' price rather than a fixed minimum commission rate. It can be expected that most brokers will be willing to discount the 'posted' price in order to attract business, as is typically done in the U.S.

Although investors who trade infrequently may have difficulty extracting significant concessions from brokers, active traders should be able to negotiate very favourable concessions if they are willing to shop around.

Investors should also avoid paying for unwanted services. Many brokers are likely to continue to offer much the same services as they did prior to unfixing. By shopping around, investors can expect to find brokers who have cut down on the less important services in order to offer a lower price.

Retail investors who do not utilize research or any of the other ancillary services of brokers will gain the most. Discount brokers can be expected to emerge to serve this segment of the investing public. In the U.S., discount brokers charge as much as 70 per cent less than the full service firms for a pure execution.

Retail investors who do value research also have something to gain. Many of the top analysts who currently work for institutional specialists are likely to move to full-service firms. As a result, the research of these analysts will become accessible to retail investors for the first time. The next couple of years will be a good time to shop for better investment analysis as the analysts themselves move within the industry.

Institutional investors will benefit from forging new relationships with their brokers. Instead of having no choice but to shop around for the firm that gives them the best value for their fixed fee, they will have an opportunity to look hard at all the services offered. How much do the services really cost? Could the institution obtain better value by seeking a lower brokerage fee, without the cost of ancillary services, and providing the desired services internally or buying them separately - perhaps from a research firm that is not a broker?

The general message is that with the introduction of competitive rates, investors will benefit from comparison shopping.

Certain exchange witnesses argued during the OSC hearings that unfixing would cause retail rates to rise in compensation for lost revenue on the retail side. However, this argument is inconsistent with evidence

that in a competitive market, competition can be expected to exist in each market segment. Retail rates will reflect the cost of serving retail clients, just as institutional rates will reflect the cost of serving institutional clients. The fact that many retail firms operated prior to unfixing profitably is clear evidence that they will be prepared to compete retail fees down to their pre-unfixing levels, whatever the desires of firms with substantial business. The U.S. experience confirms this view.

Although retail investors are unlikely to realize lower transaction costs through full-service firms, they are likely to have the opportunity of using discount brokers. This opportunity will enable those retail investors who make their own investment decisions, unaided by a broker, to do so at a saving similar to that which institutional investors are likely to realize from the unfixing of rates.

Although it is possible that retail rates will rise sufficiently to offset the various attractions to individuals of investing on their own account, there is no reason to believe that the retail price rise in Canada will be greater than either the rise in the U.S. or the rise that came with the 1977 changes in the fixed-rate schedule. These changes did not lead to a reduction in retail participation, nor did liquidity suffer. In fact, because retail clients will now be relatively more attractive, they will be the target of increased selling effort and will likely participate to an even greater extent.

If, as the evidence indicates, unfixing will result in a large decline in the commissions for large transactions, and at most a small increase in commissions for small transactions, it is inevitable that total brokerage revenues must decline. Given the relative volumes of institutional and retail business, and the anticipated price effects discussed earlier, it is conceivable that revenues could decline by as much as 10 to 15 per cent. The impact of this decline would be similar to that of a 10 to 15 per cent decline in trading volume - something the industry is quite familiar with.

There would be some belt-tightening by all firms. Perhaps a few firms would emerge in order to consolidate their business and cut overhead. However, given the general upward trend in total revenue, the lost revenue would be offset by growth within a year or two at most. Thus, brokers would carry on as they do when volume is down - after a bit of cost cutting, it would be business as usual.



## Implications for the securities industry

The members of the Toronto Stock Exchange will face a rapidly changing environment during the first few years of competitive rates. Many firms will adapt readily to price competition and prosper as a result. Firms slow to adapt will merge with, or be taken over by, those that exploit the new opportunities provided by price competition.

The firms likely to feel the effects of unfixing most are the institutional specialists. Institutional clients can be expected to demand lower-cost brokerage and to forgo all services except those they really need and cannot provide economically themselves. Revenue from institutional trading may decline by 30 per cent or more, with much business shifting from institutional specialists to integrated firms. The institutional specialists will have to broaden their client bases, by either internal expansion or merger, or else face serious financial problems. New firms formed by the merger of small retail firms and institutional specialists are likely to appear as viable and successful competitors of the established integrated firms.

Retail firms with efficient trading operations will have an opportunity to expand their institutional clientele. They will also have an opportunity to strengthen their research capabilities by picking up staff from, or merging with, the declining institutional specialists.

Whoever is first to offer a discount or 'no-frills' (execution only) service will be in a strong position to achieve rapid growth. The discount houses that emerged after unfixing in the U.S. were generally independent of the full-service firms. The same pattern may evolve here, although there is nothing to stop full-service firms from opting to open discount branches. The U.S. experience indicates that discount brokerage is a great way to attract business - although the market share of the U.S. discount brokers has never exceeded 10 per cent. Most investors, it seems, do value services; therefore, although discount brokerage can be a successful way to attract business, the discount clientele is likely to be interested in 'upgrading' to a higher fee for a 'few frills' service. In recent years, many of the larger U.S. discount firms have added services and increased their fees in order to attract the large body of investors who need more than pure execution but less than what the full-service firms offer.

### Implications for price regulation in other non-monopolistic markets

Most of the arguments presented by the proponents of competitive rates apply to other non-monopolistic industries that have price regulation. Whenever price competition is restricted, prices will tend to rise above the competitive level. These high prices will tend to attract new firms into the business. The excess supply will increase until the resulting inefficiency lowers profitability to the normal level. If this source of inefficiency is averted by restrictions on entry, then non-price competition is likely to gain importance. Service inflation can be expected to result if prices are set above the competitive equilibrium level. Cost will increase as service inflates until profits are reduced to the normal level, introducing allocative inefficiency. If service inflation is restricted, as well as entry, then the stream of excessive profits resulting from the regulated price being held artificially above the competitive level will be capitalized into the value of the 'entry fee' for the industry. This entry fee may take the form of a seat (as on the TSE), a licence (taxicabs), a quota (tobacco and food marketing boards), etc. The high price must be sustained in order for new entrants, who paid the entry fee, to earn a normal return on their investment, including the entry fee. This situation tends to lock in the high price and the associated allocational inefficiencies.

It can be expected that in general regulated prices will be above the competitive level. When profits are low, the price-regulated industry can be expected to seek increases in the regulated price rather than cut costs. Furthermore, as a consequence of service inflation, regulators will not be able to determine whether the price level reflects the competitive level or not, since they can only measure the cost of service, not the value of specific services to the consumer.

As long as the regulatory agency seeks to ensure that the industry earns a fair rate of return, the industry is likely to seek to retain price regulation. Protection from price-cutting by existing competitors or new entrants stabilizes the market share of the established firms. Also, since consumers typically find it much harder to compare quality than price, firms find it more difficult to increase market share by offering better quality than by offering a lower price. This factor reinforces the stability (risk reduction) attraction of regulation. Increased stability also reduces the penalty for inefficiency, especially if inefficiency is widespread in the industry.

Finally, it may be observed that there is a strong case for deregulation unless there is clear evidence that it will be harmful to the public interest. The status quo does not have to dominate until the problems it creates reach crisis proportions. The difficulty in achieving price deregulation is that the industry typically battles hard to retain regulation. The consumers, who pay the costs do not normally fight hard for deregulation, since they are a highly dispersed group. For individuals, the benefits of deregulation may be too small to worry about. Additionally, in the absence of competition it is difficult to determine how great the cost of regulation is. Nevertheless, the decision of the OSC demonstrates that it is possible to deregulate prices. The next few years will demonstrate the benefits and costs (if any) of deregulation.

The previous chapters were written just as the deregulation of brokerage commission rates was becoming an accomplished fact. While the full story of the effects of unfixing in Canada will not emerge for several years, enough has happened in the past few months to justify a brief postscript to the present study.

At the time of writing (June 1983), at least four discount brokerage firms were operating under the guidelines set up by the Ontario Securities Commission. They were offering 'deep discounts' of up to 85 per cent of the pre-April-1983 commission rates. Two of these firms are subsidiaries of existing firms that traditionally served a primarily institutional clientele. One of the others offers full service brokerage at greatly reduced rates. The fourth discounter is unrelated to existing full-service firms. It became the first Canadian discount broker, offering discount services in both Ontario and Quebec. It had a running start, since it provided discount brokerage for U.S. trading prior to the unfixing of rates in Canada.

The unfixing of rates has also stimulated a great deal of interest among banks and trust companies in acting as intermediaries in providing discount brokerage services to their clients. In the United States, banks have developed an interest in providing discount brokerage services to their customers only in the past year. However, this service has proved so attractive that it is quickly becoming a standard bank service in the U.S. In Canada, where the banking industry is much more concentrated than it is in the U.S., concern has been expressed over the risk that bank entry into discount brokerage could be anti-competitive. The role of financial institutions in the discount brokerage market has developed into a major issue in both Canada and the U.S. In April 1983, the Ontario Securities Commission put a temporary hold on bank entry by asking all financial institutions 'not to alter the way in which they handle unsolicited

securities transactions for their clients' until this issue is discussed at hearings scheduled for late June (Financial Post, 7 May 1983, 7). A meeting and hearing held over the summer months will result in a decision by the OSC to either attempt to maintain the functional separation between the brokerage and banking industries or to allow integration on an agency basis. Whatever the outcome, it is clear that serious concerns exist that bank entry could have anti-competitive implications which could offset some of the anticipated benefits of increased competition among brokers. On the other hand, the banks argue that their entry could further benefit the investor by offering him a major service alternative and increasing rather than decreasing competition.

In the first days of discount brokerage, the question arose of whether relations between discount brokers and their clients should be bound by the traditional requirement that brokers have sufficient information on each client to be able to advise him as to the suitability of a particular investment. While brokers are not expected to refuse orders that they consider unsuitable for a client, they are required to inform the client that they consider the investment unsuitable. The question is whether this advice should be required only if the client is being advised by the broker, or whether it should be required even with respect to investor-initiated trades. The question of whether investors should be permitted to opt out of the protection of the suitability rules was also raised. In the first week of April, the TSE decided to recommend allowing investors to opt out of the suitability rule requirements. The OSC held up any change in this policy by requiring a public hearing into the matter before the waiver procedure would be permitted.



APPENDIX  
THE ONTARIO SECURITIES COMMISSION DECISION

IN THE MATTER OF THE SECURITIES  
ACT, R.S.O. 1980, CHAPTER 466

AND

IN THE MATTER OF PART XV AND SECTIONS 22.93 TO 22.99  
OF THE GENERAL BY-LAW OF THE TORONTO  
STOCK EXCHANGE

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ORDER  
(Subsection 22(2))

WHEREAS on 23, 24 and 25 November 1982 and 7 and 8 December 1981 the Ontario Securities Commission (the "Commission") held public hearings to consider, pursuant to its powers under subsection 2 of section 22 of The Securities Act, R.S.O. 1980, c. 466, whether it is in the public interest that the by-laws of The Toronto Stock Exchange (the "T.S.E.") continue to provide for a regulated and fixed minimum commission rate structure for brokerage transactions as opposed to fully competitive, unregulated rates;

AND WHEREAS the Commission, after reading and hearing the evidence adduced and the submissions of counsel for the T.S.E., for the Commission des valeurs mobilières du Québec, counsel for the Director of Investigation and Research, Combines Investigation Act (Canada) and the Commission's staff counsel, has determined that it is not in the public interest to permit the by-laws of the T.S.E. to continue to provide for a fixed minimum commission rate structure for brokerage transaction;

AND WHEREAS the Commission deems it appropriate to permit the members of the T.S.E. a period of time within which to prepare to change to an unregulated, fully competitive commission rate structure;

NOW THEREFORE IT IS ORDERED, pursuant to subsection 2 of section 22 of The Securities Act, R.S.O. 1980, c. 466, that, as at 0001 hours on Friday 1 April, 1983, Part XV and sections 22.93 to 22.99, in-

clusive, of the General By-law of The Toronto Stock Exchange should be repealed and cease to have any force or effect from the opening of trading on Friday 1 April 1983.

DATED at Toronto this 25th day of June 1982.

## IN THE MATTER OF THE SECURITIES ACT

AND

IN THE MATTER OF PART XV OF THE BY-LAWS OF  
THE TORONTO STOCK EXCHANGE

Hearings: November 23, 24, 25, 1981  
December 7, 8, 1981

<u>Present:</u>	Henry J. Knowles, Q.C.	- Chairman	)	
	Harry S. Bray, Q.C.	- Vice-Chairman	)	Ontario
	Robert T. Morgan, C.F.A.	- Commissioner	)	Securities
	William A. Simonton, F.C.A.	- Commissioner	)	Commission
	E. Stuart Miles	- Commissioner	)	
	Stuart Thom, Q.C.	- Commissioner	)	
	William T. Pidruchney	- Chairman	)	Alberta
	R. Donlevy	- Commissioner	)	Securities
			)	Commission
	Rupert L. Bullock	- Superintendent of Brokers	) )	British Columbia
	Paul Guy	- Chairman	)	Commission
			)	des
			)	valeurs
			)	mobilières
			)	du Quebec
	J.W. Garrow, Q.C.	) Counsel to the Toronto		
		) Stock Exchange		
	W. Ian C. Binnie, Q.C.	- Counsel to Director of Investigations and Research, Combines Investigation Branch		
	Jean Pierre Cristel	- Counsel to Commission des valeurs mobilières du Quebec		
	Edward Waitzer	) Staff Counsel		
	Keith Boast	)		

## NATURE OF HEARING

This hearing was convened by the Commission (O.S.C.) under the provisions of what is now subsection 22(2) of the Securities Act, R.S.O. 1980, c. 466 (the "Act") for the purpose of considering whether it is in the public interest to permit The Toronto Stock Exchange (the "T.S.E.") through Part XV of its By-laws to continue to provide for a fixed minimum commission rate structure for brokerage transactions as opposed to fully competitive, negotiated or non-regulated rates. The hearing flows from the conclusions found in the O.S.C.'s 1977 decision (1977 O.S.C.B. 157 at 169).

The equivalent provisions of the Vancouver and Alberta stock exchanges were being reviewed by the British Columbia Superintendent of Brokers and the Alberta Securities Commission. As an aid to their proceedings and with the consent of the parties they joined in these proceedings, hearing the evidence and receiving the arguments. The Chairman of the Commission des valeurs mobilières du Québec, whose Commission convened a similar hearing with respect to the Montreal Exchange, was present as an observer.

Subsection 22(2) of the Act reads, in part, as follows,

The Commission may, where it appears to it to be in the public interest, make any decision,

- (a) with respect to the manner in which any stock exchange in Ontario carries on business;
- (b) With respect to any by-law, ruling, instruction or regulation of any such stock exchange...

This language parallels the language of subsection 139(2) of The Securities Act, 1966, through which the Legislature first directed the O.S.C. to oversee the activities of the T.S.E. The Securities Act, 1966 came into force on May 1, 1967.



## BACKGROUND AND HISTORY

On May 25, 1967 the O.S.C. convened a public hearing in which it considered changes proposed by the T.S.E. to its commission rate schedules. The O.S.C. approved the new rate schedule for the reasons reported in the June 1967 O.S.C.B. at page 15. The first in-depth review of the T.S.E.'s commission rate structure took place in May and June of 1973 in which the proposal for what was titled a "New National Commission Schedule" was examined with some care by the O.S.C. The O.S.C. concluded that empirical data was not available to determine whether or not the suggested rate structure was in the public interest. At that point in time dealers in the United States of America (U.S.A.) had not been directed to abolish their fixed commission rate structure.

The concerns canvassed in the 1973 reasons (1973 O.S.C.B. 107) remain fresh and relevant today, even though they must be placed against a different backdrop as we shall note below. These are expressed commencing at page 118, in part, as follows,

The proposal speaks of providing a 'reasonable' opportunity for the 'individual investor' to participate directly in the market providing the brokerage community is encouraged to adequately serve him. While there was some uncertainty about the size of 'small investor', having available for investment '\$10,000 and under - \$5,000 and under', and so on, his voice was clearly heard...

The submissions naturally tended to be subjective. The increasing absence of the small investor from the market place was sadly noted. His importance to its pricing mechanism was...commented upon. His savings in recent years tend to be diverted into institutional and other forms of investment. Despite the considerable effort devoted to making more facts available to him so that he can enter the market place with greater confidence he in fact enters, if at all, with circumspection. With market motivation studies being done in so many areas it is not inappropriate that we learn more about the 'small investor'.

It is equally true that if we wish the securities industry to raise capital and provide viable secondary trading markets the potential rate of return to the dealer must be such as to encourage service, competition and innovation. It is equally against the public interest to reduce the brokerage community to marginal levels. We have noted the demands placed upon its members which range from stringent minimum capital requirements, record keeping and ancillary services, communications and research, training and support of their sales administrative staff, financial support for industry wide studies and innovation in areas such as the central securities depository and the computer-assisted trading system.

The O.S.C. was concerned, through those reasons, that the most

efficient members of the brokerage community should receive a rate of return on their invested capital which was fair compared to other alternatives available to them in other industries for the investment of their capital (see page 123 1973 reasons). However, the O.S.C. did refuse the application in part and suggested certain changes to the proposed By-law XV. The O.S.C. also recommended that the T.S.E. move forward to develop sources of information which would provide the empirical data from which the need for change and the impact of change in commission structure could be measured. It was also suggested that a good deal more information about "investors" ought to be collected.

On July 24, 1974 the T.S.E. made application to impose an immediate flat interim 10% surcharge on all orders of \$5,000 or more. The cost study directed in 1973 by that time had been undertaken. As the O.S.C. noted in the reasons issued following its October 1974 hearings, (1974) O.S.C.B. 199 at 200, (it did not permit the immediate surcharge),

The T.S.E. has been caught in the double-bind that is the unique feature of the current economy - inflation has forced operating costs sharply higher while both the volume and value of transactions has moved much lower, thus causing a severe financial crisis within the securities industry.

Evidence was led in camera to demonstrate the nature and extent of the difficulties. By that time the O.S.C. noted that dealers in the U.S.A. were expected to go to a deregulated rate structure as they did in fact on May 1, 1975. In granting permission to levy the surcharge for a period from January 1, 1975 to July 31, 1975, the O.S.C. observed that both the O.S.C. and the T.S.E. must monitor the changes in the U.S.A. marketplace flowing from the move to a competitive rate structure.

The T.S.E. was permitted to extend the surcharge for a further period (following a hearing on July 24, 1975) to November 30, 1975. No reasons were issued for granting this extension. However, in November 1975 the O.S.C. held a further public hearing on an application made by the T.S.E. to further extend the surcharge for a period of one year to November 30, 1976. For the reasons given in (1975) O.S.C.B. 278, the O.S.C. refused the application permitting a brief period of extension to January 1, 1976 to enable the necessary adjustments to be made to computer and other procedures. Flowing from this 1975 hearing the O.S.C. made the following statement at page 281,

This hearing was not convened for the purpose of determining whether the industry is receiving a fair return on capital or whether the T.S.E. should repeal its minimum commissions. We were considering whether the serious losses reported a year ago were continuing and they are not. The question as to whether Ontario brokers should move to unfixed or negotiated commissions will be considered at the public hearing which the Commission proposes to hold commencing Monday, May 31, 1976...

This extensive hearing did not commence until July, 1976 concluding in October, 1976. It concerned itself exclusively with the issue, whether it was in the public interest to require the T.S.E. to amend its By-law XV by abolishing the fixed minimum commission structure, thereby permitting T.S.E. members to go to a fully competitive or deregulated rate structure. The result, reported in (1976) O.S.C.B. at page 289 was a four-to-two split in the six-man panel with the minority, Commissioners Beck and Johnston, for concluding that the industry should be put on notice that it must move immediately toward negotiated rates and that appropriate adjustments must be made. On the role of the O.S.C. as a rate fixing body the minority offered, at page 312, the following observations,

No witness testified that the Canadian securities industry was one that from an economic point of view is suited for rate regulation. Indeed it is doubtful if a witness with even a nodding acquaintance with the economics of rate regulation could be found to so testify. To repeat what is noted above, an industry characterized by many participants supplying a different product mix to consumers with a highly unstable demand is classically unsuited to rate regulation. Those who favoured the retention of fixed rates did so almost exclusively on the basis of a deeply felt concern for the effects of negotiated rates on the industry and hence on the future ability of the Canadian public market to meet the financial demands of the economy. What would properly be required for a regulatory agency to fix rates for the securities industry is at least the following:

- (a) uniform cross-industry accounting;
- (b) An allocation of costs designed to cover the commission rate areas;
- (c) an allocation of the capital being used to cover the commission revenue part of the business;
- (d) a determination of a rate of return on capital for the industry.

The majority view contained reservations. The 1976 reasons note, at page 298,

The six Commissioners who heard the representations and studied the briefs find themselves unable to agree completely. Dean Johnston and Professor Beck would immediately direct the cancellation of fixed commissions. The Vice-Chairman does not agree that negotiated rates should be introduced

forthwith but is of the opinion that such rates must come, probably within the next five years. The remainder of the Commissioners, namely, the Chairman and Messrs. Steiner and Morgan are of the view that there may be no necessity for negotiated rates if fair and reasonable fixed rates are introduced. They hold the view that though negotiated rates might be beneficial to the institution it is doubtful that they would be of benefit to the retail individual investor whose presence in the market in their opinion is necessary to provide liquidity. They are also of the view that mere price competition is not the answer when service alone is being provided.

Notwithstanding the different views expressed above, all four members of the Commission who have joined in these reasons believe that the Exchange and its members should be given an opportunity to try and introduce fair and reasonable rates.

The T.S.E. responded with the revised rate structure which was considered by the Commission at its hearing in June 1977. Five of the original six Commissioners, Messrs. Pattillo, Bray, Beck, Johnston and Morgan, sat on this hearing together with two newly appointed Commissioners, Messrs. McCartney and Simonton. The 1976 majority reasons had suggested five questions to be applied at any subsequent hearing. These questions, repeated at page 158 of the 1977 reasons, (1977 O.S.C.B. 157) were as follows,

1. Is there an adequate base on which to make a decision?
2. Will there be effective competition between brokers?
3. Considering the interdependence of its several parts, underwriting, secondary, bond and money market trading, do the proposed rates produce unreasonable profits?
4. Does the proposed rate structure give any segment of the industry unreasonable profits?
5. Is this structure perceived as fair by those the industry serves?

While the conclusions reached have been cited at this hearing on behalf of the T.S.E. as demonstrating that the O.S.C. is an effective rate setting body those of us who participated in the 1977 proceedings had no such firm convictions. The 1977 reasons conclude, at page 169, as follows,

...we agree that the proposed rate schedule is in the public interest. We approve amended By-law XV subject to its being implemented as of September 1, 1977 to continue for a period of two years with the opportunity for the T.S.E. to propose at a time earlier than the expiration of two years any changes in the rate schedule that the T.S.E. deems appropriate. At the end of the two-year period, this rate schedule or any other new proposal will be reviewed by the Commission in the light of market volumes and other conditions which prevail at that time.

Two of our colleagues, Commissioners Beck and Johnston who dissented from the majority opinion and who wrote a separate minority opinion favouring negotiated commissions on October 28, 1976 continue to hold the view that a negotiated commission rather than a fixed minimum commission rate structure is more appropriate for the securities industry for the reasons set out in their minority opinion on October 28, 1976. However, they both concur in this decision on the basis that if there is to be a fixed minimum commission rate structure, the one proposed is not contrary to the public interest.

## THE PRESENT HEARING

The issues to be determined through this hearing, simply put by the T.S.E. in its written argument, is whether it is in the public interest to continue the system of regulated fixed commission rates previously approved by the O.S.C. or to replace these arrangements with competitively set rates unsupervised by the O.S.C. The T.S.E. then goes on to state that those who favour change should satisfy the O.S.C. affirmatively that the public interest will be served by such a change or that the present system is subject to abuses of a kind that can only be eliminated by deregulation. The onus of proof it contends is on those advocating such a change.

The position of the O.S.C. Staff ("Staff") and of the Director of Investigation and Research, Combines Investigation Act, (the "Director"), is that regulated fixed minimum commission rates should be abolished. The first question to be addressed is whether those advocating change are required to establish that the virtues and benefits of free competition are so obvious and compelling that regulated fixed minimum commission rates, about which there has certainly been no strenuous public outcry, should be repealed.

In addressing this question, the O.S.C. would first make it clear that in carrying out its oversight responsibilities under subsection 22(2) of the Act it does not regard this kind of hearing as having a formal adversarial character analogous to litigation. Although the issues presented for deter-



mination can be clearly expressed, there is not the same definition with regard to the interested parties. The Staff and the Director do not have a direct economic interest in the outcome of the deliberations but represent before us what they see to be the public interest. The T.S.E., having been mandated to do so by its members, quite properly supports its own rate schedules. It too has only an indirect and not too readily quantifiable economic interest in the outcome and there is a significant lack of agreement among its members.

The T.S.E. members, as a whole, were not so nearly unanimously against the abolition of a regulated fixed minimum rates as they were in 1976. In 1976 the T.S.E. was instructed by vote of the overwhelming majority of its members to oppose the move to unfixed rates. The more recent vote found 57 firms holding 74 votes voting for the continuation of regulated fixed rates, 21 firms with 40 votes voting for competitive rates, with 2 firms with 2 votes not voting. We do note and appreciate that this indicates that the larger firms appear to be in favour of full competition while the current T.S.E. submissions reflect concerns of the smaller retail and institutional firms as to the impact of competitive rates on them.

The O.S.C., as an administrative tribunal, does not regard itself as a court of law with no responsibility other than to solve issues that are placed before it according to applicable law. The O.S.C., being charged with regulatory responsibilities, has a duty to ascertain and declare where the public interest lies and to do what should be done to protect this declared interest. The O.S.C. acknowledged, in calling this hearing, that an important aspect of the public interest is identified in section 32 of the Combines Investigation Act, Chapter C-23, R.S.C. 1970, as amended. Counsel to the Director stated the public interest in his written submission of March 12, 1982, at page 2, in language accepted by the O.S.C., as follows,

It is the law of the country, whether we agree with it or not... that price fixing as such is thought to be against the public interest. All of the witnesses agree...that competition should only be displaced in the exceptional case and that as a matter of policy, people should be able to compete.

In his preliminary submission of September 1981, at page 5 the Director made the same point, using the following language,

Looking beyond the brokerage industry to the entire economy, it would have to be said that the desired status quo position of the Canadian economic

system is price competition. This suggests that the burden of proof should lie with those who support the view that special circumstances exist in the case of the securities industry which cause it to be unsuited to competitive pricing.

Such a burden of proof might be satisfied by demonstrating that the industry is a natural monopoly or oligopoly, that competitive pricing would dramatically impair the flow of information concerning the market, or that the industry is too fragile to survive the low points of cyclical demand...

The view is taken that the burden of proof lies with the argument for fixed rates because the Canadian market system enshrines the concept that competition best serves the public interest. This presumption in favour of competition finds legislative expression in the Combines Investigation Act, which outlaws various anti-competitive types of behaviour. In large measure, the use of regulation is limited to the control of situations in which the competitive mechanism can be shown to be inoperative.

Through the evidence and argument so ably presented on behalf of all parties, the issues were more sharply defined than at any of the earlier public hearings, particularly the 1976 hearing. In the end result we adopt the following statement which appears in the 1976 decision, at page 300, and reads as follows,

Price competition is perceived by many as the best method for the maintenance of a free, efficient economic system beneficial to the public. Assuming suitable safeguards against monopoly or a tendency to destructive oligopoly, it is alleged that the capital market, institutional investors and the general public would be well served and that such a system would be free to respond to external as well as domestic competition. The contention is that with competitive rates there comes a perception of fairness that can never be completely present so long as there are approved fixed minimum rates of commission and that competitive pricing also encourages both innovation and rationalization in any industry.

The majority did not adopt these reasons in 1976, noting there were other areas of competition, continuing at page 300,

While fixed commission rates may be perceived to be a protective tariff benefiting those entitled to access to the exchange's trading floor, it should be remembered that stock exchanges and their members are already subject to the impact of competition both external and inter se.

The nature and extent of this competition becomes even more apparent when one examines the range of activities of what is generally called the 'securities industry'. The securities industry includes the smallest broker through to the most complex of organizations offering a broad range of financial services.

The securities industry has demonstrated itself to be innovative, aggressive, and product oriented. Nowhere have the winds of change blown more fiercely. The developments, touched upon as proposals in the 1973 reasons, are now implemented realities, viz., the Canadian Depository for Securities and the T.S.E.'s computer-assisted trading system. Since 1976 many developments have occurred. Securities dealers are marketing exchange traded stock option contracts and financial futures contracts. The T.S.E. has developed an equity based futures contract for which it is currently seeking approval and has hinted at other innovations for the T.S.E. sponsored futures exchange. New rules were introduced by the T.S.E. governing principal trading. Securities dealers participate in takeover and issuer bids, make corporate valuations, act as fiscal agents in the burgeoning private placement markets - markets which are international in their scope, provide portfolio management and pension fund management services, and as the targets of opportunity present themselves through amendments to our income tax laws have successively marketed a variety of tax shelters including oil drilling partnerships, MURBS, and film packages. They assist with employee share plans, dividend reinvestment plans and, with the assistance of the trust companies, will manage registered retirement savings plans. Many securities firms are also future commission merchants trading in commodity future contracts in markets throughout North America and the world. The T.S.E. has obtained recognition as a futures exchange which it is hoped in the near future will become a sister but separate corporation, the Toronto Futures Exchange.

The T.S.E., in its argument, expounds two main themes. It states, firstly, that the onus is on those proposing change to demonstrate why that change is needed. It says, secondly, that the present rate structure is working well, that the O.S.C. said in 1977 that it was fair, and the O.S.C. is capable of reviewing it and saying whether or not it is still fair. As to the latter we find much merit in the conclusions reached by Commissioners Beck and Johnston in 1976 as to the unsuitability of a segment of the securities industry to rate fixing concepts. The O.S.C. did not attempt to come to grips with these real difficulties in its 1977 reasons.

Using the Director's test it has not been suggested that the securities industry is a natural monopoly or oligopoly or that competitive pricing would dramatically impair the flow of information concerning the market. The totality of the evidence submitted in support of the continuation of

regulated minimum commission rates was accurately forecast in the Director's preliminary submission of September 1981, where, after stating that the burden of proof is typically placed on those seeking to change by those seeking to preserve it, the Director continues, at page 3,

In line with this view, advocates of fixed rates typically argue that:

- the present system appears to be working reasonably well
- there is no outcry for change
- switching to competitive pricing would create a disruption in the securities industry

and therefore the present fixed rate situation should continue to prevail.

The argument of Counsel to the T.S.E. was reinforced by subsequent written submissions. In dealing with the evidence the argument commences at page 4 of the T.S.E.'s written submission, as follows,

It is the position of the Exchange that no compelling reason has been made out to exchange the present system, which is known to work effectively and serve the public interest, for an unknown set of circumstances offering theoretical benefits, and the risk of potential detriment for the Canadian markets.

In support of this proposition, the evidence was reviewed under topic headings concerning competition in the brokerage industry, the lack of any abuses resulting from a regulated fixed rate structure, the proposition that the O.S.C. is capable of approving commission rates, the submission that an adequate data base is available on which to assess commission rate proposals, an argument that the regulated fixed rate system works well, with the next submissions being that both the retail rates and the institutional rates will continue to be reviewed by the O.S.C., a concern that competitive rates will lead to increased concentration in the industry, with the final submission being that it is impossible to anticipate significant results of deregulating rates.

The staff submission concerned itself with the objectives of continuing O.S.C. approbation of regulated minimum brokerage commission rates dealing with the underlying concern that deregulation would result in lessened profitability and a destabilization of the industry, a withdrawing of alleged hidden subsidies given to the smaller retail customer, the necessity of maintaining T.S.E. revenues to ensure a continuing high quality of self-regulation, the argument that the present industry structure should

be preserved and the more general submission that the regulatory system is performing well and, in the absence of compelling reasons, should not be altered. Staff noted that it was universally agreed that the institutional investors benefit from price competition. The interests of those investors, who collectively represent pools of very small investors, is in maintaining a liquid market and a diversity of services thus ensuring a continuing role for individual investors.

The O.S.C. is grateful for the participation of their colleagues from the other provinces during the proceedings, with particular reference to the Counsel from the Commission des valeurs mobilières du Québec. In reaching our conclusions we had the benefit of many written submissions, and the oral testimony of numbers of very experienced representatives from the securities industry, including the President and the Chairman of the Board of Governors of the T.S.E. It is with some diffidence that we find ourselves unable to reach the conclusions urged upon us by those supporting the continuance of regulated fixed minimum commission rates.

To assist us in reaching these conclusions, particularly as to the possible consequences of our decision, we were fortunate to have the evidence of Commissioner John Evans of the Securities and Exchange Commission of the U.S.A. ("S.E.C."), former S.E.C. Commissioner Irving Pollack, who had a leading role in the events which led to the S.E.C.'s decision to abolish regulated fixed minimum rates in 1974, and Dr. Jeffrey M. Schaefer, an economist who is the Senior Vice President of the Securities Industry Association of the U.S.A. While it is quite properly submitted what we ought not dogmatically to accept what has happened in the U.S.A. as evidence of that is likely to happen here in the event that rates are deregulated, nonetheless there are sufficient similarities between the securities industries in the U.S.A. and Ontario that we can draw some lessons from the experience in the U.S.A.

Commission rate hearings have been but a part of an evolutionary process which has led us to the present threshold. While the O.S.C. in the past has attempted in the public interest to determine whether particular commission rate structures were fair to all classes of investors and, following the 1977 hearing, accepted a particular rate structure (the present rate structure) as being fair and not contrary to the public interest, the subsequent changes in the securities industry and its associated activities, outlined in some detail above, have made it increasingly impractical, inappropriate, if not impossible, to determine what is or



is not a fair commission rate structure. Accordingly, we unanimously adopt the position taken by the minority at the 1976 hearing, at page 312, supra, concerning the difficulty in appropriate and fair rate fixing in the securities industry.

We have concluded, on all the evidence, that we can no longer continue to sanction a practice, no matter how long it has been in existence, which is contrary to the aspect of the public interest identified in section 32 of the Combines Investigation Act, Chap.C-23, R.S.C. 1970, as amended. We are mindful that the brokerage community, as the rest of the economy, is presently in a cyclical trough with restructuring taking place even with the perceived protection of the regulated fixed minimum rate structure. This same regulated fixed minimum rate structure acts as a constraint on any firm wishing to increase its rates as well as a prohibition against a firm that wishes to reduce them. In the end result the small investor may pay a larger commission if he uses the services of the so-called "full-service" broker. The so-called "discount broker" may emerge, as indeed it has in Toronto in the commodities field, for the investor not needing the advice or the range of services now routinely available through most brokerage firms.

Subsections 22.93 to 22.99 inclusive of the T.S.E.'s By-law XXII provide for regulated fixed minimum commissions for the trading in options issued by Trans Canada Options Inc. ("T.C.O." options). While this area was not specifically dealt with, T.C.O. options are a structured form of put and call options on securities listed on the T.S.E. which, were it not for the proviso in subsection 22.93 of By-law XXII, would be covered by subsection 15.14 of By-law XV. We have not thought it necessary to specifically deal with the question of commission on T.C.O. options trading on the premise that the larger question as to the commissions charged on trades in listed securities encompassed the lesser question of the commissions permitted to be charged on trades in options on listed securities. The matter is dealt with in the formal order, however.

For those firms who have not already planned against the eventuality of rate competition we have concluded that they should be given some time to adjust. After reaching our conclusions we consulted our colleagues in the other provinces and learned that Quebec has independently reached the conclusion that the Montreal Exchange should repeal its regulated fixed minimum commission by-laws, on the basis of the hearing held by it. We have agreed that each of our independently determined orders should

become effective as at the start of business on April 1, 1983 and that the commissions charged by brokers in Ontario for transactions effected through the T.S.E. should be a matter of arrangement between the broker and its client. The T.S.E. has therefore been directed to repeal Part XV and subsections 22.93 to 22.99 inclusive of Part XXII of its By-laws effective at the opening of business on April 1, 1983.

DATED at Toronto this 25th day of June, 1982.

## TABLES

TABLE 1  
Total assets of financial industries (\$ billions)

Industry	Largest company	Total industry
Banks <sup>a</sup>	51.7	224.4
Life insurance <sup>b</sup>	6.8	38.4
Trust companies <sup>b</sup>	5.8	29.2

a As of 31 October 1979.

b As of 31 December 1979.

SOURCE: TSE (1981, Appendix B, Exhibit 12).

TABLE 2  
Capital, value of trading, and value of listed shares on the TSE  
(\$ billion)

Total capital <sup>a</sup>	0.5
Value of trading <sup>b</sup>	18.7
Value of listed shares	325.7

a As of 31 March 1980.

b Calendar year.

SOURCES: TSE (1981, Exhibit 10 and Appendix B, Exhibit 4) and TSE internal files.

TABLE 3  
Relative importance of revenue sources - TSE members

<u>Revenue sources</u>	<u>1980</u>
Commissions	65.8%
Underwriting	16.5
Trading and investment profit	14.2
Other	<u>3.5</u>
TOTAL	<u>100.0%</u>

SOURCE: TSE (1981, Appendix A, Exhibit 14).

TABLE 4  
Canadian stock exchange activity

Exchange	Dollar value (\$ millions)		Percentage of total dollar value		Share volume (\$ millions)		Percentage of total share volume		Average traded share price	
	1982 <sup>a</sup>	1981	1982 <sup>a</sup>	1981	1982 <sup>a</sup>	1981	1982 <sup>a</sup>	1981	1982	1981
Toronto	17,671	25,094	79.8	76.7	1,577	1,510	47.0	43.5	11.21	16.62
Montreal	2,781	3,328	12.6	10.2	209	205	6.2	5.9	13.33	16.27
Vancouver	1,561	3,859	7.1	11.8	1,443	1,574	43.0	45.4	1.08	2.45
Alberta	121	427	0.5	1.3	127	179	3.8	5.2	.95	2.39
Winnipeg	3	1	-	-	2	1	-	-	1.35	1.11
TOTAL	22,137	32,709	100.0	100.0	3,357	3,469	100.0	100.0		

<sup>a</sup> Preliminary

SOURCE: The Globe and Mail, Business Section, 1 January 1983.



TABLE 5  
TSE member agency equity business by type of client

Period	Individual	Institutional	Intermediary <sup>a</sup>
1965	54.6%	27.3%	18.1%
1968	54.1	33.5	12.4
1970	45.9	41.3	12.8
1975	47.3	43.9	8.8
1976	49.2	44.4	6.4
1977	48.3	45.5	6.2
1978	50.7	43.8	5.5
1979	52.3	41.5	6.2
1980	55.5	37.7	6.9
Jan-Mar 1981	53.3	39.9	6.8
Apr-Jun 1981	54.2	39.7	6.1
Jul-Sep 1981	49.9	45.0	5.2
Oct-Dec 1981	49.0	46.2	4.8
Jan-Mar 1982	43.4	52.0	4.7
Apr-Jun 1982	40.3	54.9	4.8

a Intermediary represents trading for non-member brokers.

SOURCE: TSE (1981, Appendix A, Exhibit 22). Update by TSE Revenue and Market Analysis Study (1981, 1982).

TABLE 6  
TSE member agency equity commissions by type of client

	Individual	Institutional	Intermediary <sup>a</sup>
1976	61.5	34.3	4.2
1977	62.3	33.8	3.9
1978	66.4	30.3	3.3
1979	69.7	26.6	3.7
1980	72.3	22.7	4.5

a Intermediary represents trading for non-member brokers.

SOURCE: TSE (1981, Appendix A, Exhibit 23).

TABLE 7  
TSE members' trading value and commissions revenues

Year	Trading value (\$ billion)	Per cent change	Commission revenue (\$ million)	Per cent change
1975	4.1	- 8.9	183.9	+10.4
1976	5.1	+24.4	166.0	- 9.7
1977	6.0	+17.6	212.7	+28.1
1978	10.4	+73.3	361.7	+70.1
1979	18.7	+79.8	498.9	+37.9
1980	29.5	+57.8	741.3	+48.5
1981	25.1	-14.9	563.0	-24.1
1982	17.7	-29.6	409.9	-27.2

SOURCES: TSE (1981, Appendix A, Exhibit 4). Commission revenue for 1981 and 1982 obtained from TSE internal files.

TABLE 8  
Schedule in effect November 1973 - September 1977

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BASIC FORMULAE FOR THE RATE SCHEDULE

The bases for the calculation of commissions on all orders with values of \$20,000 or less are as follows:

- (1) On shares selling under \$14.00:  
the base rate applicable to the first \$20,000  
of each order is 2.50% of the value of the  
order.
- (2) On shares selling over \$30.00:  
the base rate applicable to the first  
\$20,000 of each order is 1.64% of the  
value of the order.
- (3) On shares selling at \$14.00 up to and including  
\$30.00:  
the formula applicable to the first \$20,000 for  
of the order value plus 22.57¢ per share.

TAPERING SCHEDULE FOR BASE RATES OF SCHEDULE

The following percentages of the basic rates shall apply for orders over \$20,000 in value:

On the first \$20,000	100% of the base rates
On the next \$20,000	70% of the base rates
On the next \$20,000	50% of the base rates
On the remainder	30\$ of the base rates

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TABLE 9  
Schedule in effect September 1977 - April 1983

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BASE COMMISSION RATE SCHEDULE

The base rates for the calculation of commission on all orders are as follows:

<u>Where the transaction price of the stock is</u>	<u>but less than</u>	<u>base rate of commission is</u>
\$0.005	\$ 5.00	3% of order value
\$5.00	\$15.00	2% of order value + 5¢ per share
\$15.00 and above		1% of order value + 20¢ per share

If the value of an order exceeds \$5,000, the base rates given above may be reduced by the following tapering schedule.

TAPERING SCHEDULE FOR BASE COMMISSION RATES

The following tapering schedule may be applied to the base commission on any order involving more than \$5,000.

For the first \$40,000 of the order as follows:

<u>Money involved</u>	<u>Tapering schedule</u>
On the first \$5,000	100% of the base commission
On the next \$15,000	90% of the base commission
On the next \$20,000	80% of the base commission

For the portion of the order over \$40,000: the following commission charge applies for each share associated with the portion of the order over \$40,000 in value:

<u>Where the average order price (of Canadian transaction) is</u>	<u>Charge per share associated with portion of order over \$40,000 is</u>
Under \$10 per share	Average order price (of Canadian transactions) + 10¢
\$10 or above	10¢

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TABLE 10

TSE commission rates in cents per share before and after the 1977 schedule change

## Before the 1977 change

Share price	Size of trade			
	100	500	1,000	10,000
\$10	25	25	25	14.00
\$25	44.7625	44.7625	42.08	18.08
\$50	82.00	77.08	63.96	28.86

## After the 1977 change

Share price	Size of trade			
	100	500	1,000	10,000
\$10	25	25	23.75	14.625
\$25	45	45	40.5	14.01
\$50	70	65.8	53.1	14.31

## Ratio of post-1977 to pre-1977 rates

Share price	Size of trade			
	100	500	1,000	10,000
\$10	1.000	1.000	0.950	0.957
\$25	1.005	1.005	0.962	0.775
\$50	0.854	0.854	0.830	0.496



TABLE 11

TSE commission rates as percentage of principal value before and after the 1977 schedule change

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Before the 1977 change

<u>Share price</u>	<u>Size of trade</u>			
	100	500	1,000	10,000
\$10	2.5	2.5	2.5	1.4
\$25	1.7905	1.7905	1.6832	0.7232
\$50	1.64	1.5416	1.2792	0.5772

After the 1977 change

<u>Share price</u>	<u>Size of trade</u>			
	100	500	1,000	10,000
\$10	2.5	2.5	2.325	1.4625
\$25	1.8	1.8	1.62	0.5604
\$50	1.4	1.316	1.062	0.2862

Ratio of post-1977 to pre-1977 rates

<u>Share price</u>	<u>Size of trade</u>			
	100	500	1,000	10,000
\$10	1.000	1.000	0.950	0.957
\$25	1.005	1.005	0.962	0.775
\$50	0.854	0.854	0.830	0.496

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TABLE 12

Comparison of size and value of trades, institutional versus individual investors

Quarter	Average trade volume		Average share price		Average trade value (\$000)		Ratio trade value inst. to ind.
	Inst.	Ind.	Inst.	Ind.	Inst.	Ind.	
Jan-Mar 76	1284	724	16.30	6.10	20.9	4.4	4.74
Apr-Jun 76	1213	830	16.00	5.00	19.4	4.2	4.68
Jul-Sep 76	1234	787	16.72	5.62	20.6	4.4	4.66
Oct-Dec 76	1270	799	15.42	5.15	19.6	4.1	4.76
Jan-Mar 77	1273	804	15.44	5.21	19.7	4.2	4.69
Apr-Jun 77	1296	796	15.74	5.42	20.4	4.3	4.72
Jul-Sep 77	1392	763	15.23	5.85	21.2	4.5	4.75
Oct-Dec 77	1560	958	14.54	4.55	22.7	4.4	5.20
Jan-Mar 78	1504	895	15.52	5.29	23.3	4.7	4.93
Apr-Jun 78	1719	832	15.23	6.52	26.2	5.4	4.83
Jul-Sep 78	1695	852	17.38	6.80	29.5	5.8	5.08
Oct-Dec 78	1812	865	17.85	6.85	32.3	5.9	5.46
Jan-Mar 79	1817	821	17.14	7.09	31.1	5.8	5.35
Apr-Jun 79	1828	797	20.60	8.77	37.7	7.0	5.39
Jul-Sep 79	1836	956	19.88	7.13	36.5	6.8	5.35
Oct-Dec 79	2089	948	20.90	7.40	43.7	7.0	6.22
Jan-Mar 80	2074	1039	20.22	7.09	41.9	7.4	5.69
Apr-Jun 80	1968	866	19.50	8.42	38.4	7.3	5.26
Jul-Sep 80	2197	934	21.63	7.28	47.5	6.8	6.99
Oct-Dec 80	2312	988	19.26	7.28	44.5	7.2	6.19

SOURCE: TSE Revenue and Market Analysis Study, various years.

TABLE 13  
Commission rates in cents per share by type of customer

Period	Institutional	Individual	Intermediary	Ratio institutional to individual
Apr-Jun 75	19.5	9.9	7.9	1.970
Jul-Sep 75	19.6	8.4	5.9	2.333
Oct-Dec 75	18.5	7.7	4.8	2.403
Jan-Mar 76	NA	NA	NA	NA
Apr-Jun 76	17.9	9.0	5.0	1.989
Jul-Sep 76	18.2	9.9	4.6	1.838
Oct-Dec 76	17.2	9.3	3.9	1.849
Jan-Mar 77	17.2	9.5	4.3	1.811
Apr-Jun 77	17.5	10.1	4.6	1.733
Jul-Sep 77	16.9	10.9	4.7	1.550
Oct-Dec 77	14.9	8.9	4.0	1.674
Jan-Mar 78	15.6	9.7	4.0	1.608
Apr-Jun 78	14.5	11.2	4.8	1.295
Jul-Sep 78	15.5	11.7	5.2	1.325
Oct-Dec 78	15.0	11.4	4.9	1.316
Jan-Mar 79	14.6	11.9	5.0	1.227
Apr-Jun 79	15.5	13.6	5.6	1.140
Jul-Sep 79	15.3	11.4	5.0	1.342
Oct-Dec 79	14.9	11.6	5.2	1.284
Jan-Mar 80	14.3	10.9	5.4	1.312
Apr-Jun 80	14.7	12.5	5.5	1.176
Jul-Sep 80	14.6	12.5	6.0	1.168
Oct-Dec 80	13.5	11.6	5.8	1.164
Jan-Mar 81	14.3	12.6	6.0	1.135
Apr-Jun 81	14.6	13.8	5.0	1.058
Jul-Sep 81	11.8	13.0	5.5	0.908
Oct-Dec 81	12.9	9.8	4.0	1.316
Jan-Mar 82	12.5	10.4	4.2	1.202
Apr-Jun 82	11.6	10.2	4.2	1.137

SOURCE: TSE Revenue and Market Analysis Study, various years. Data is for TSE member agency equity business.

TABLE 14

Average value per share and number of shares per transaction on the TSE  
1960-82

	Average value per share	Average number of shares per transaction
1960	2.60	388
1961	3.51	390
1962	2.57	483
1963	2.65	502
1964	2.32	579
1965	3.42	445
1966	2.96	486
1967	4.30	401
1968	5.50	353
1969	6.61	342
1970	6.99	327
1971	8.64	313
1972	9.84	328
1973	10.15	349
1974	7.96	407
1975	8.71	402
1976	9.27	432
1977	8.89	485
1978	10.52	545
1979	13.46	557
1980	14.69	608
1981	16.62	595
1982	11.21	757

SOURCES: TSE historical trading file and TSE internal files.

TABLE 15

Commission rates as percentage of principal value, by type of customer

Period	Institutional	Individual	Intermediary	Ratio institutional to individual
Apr-Jun 75	1.24%	1.87%	1.25%	0.663
Jul-Sep 75	1.28	1.92	0.99	0.667
Oct-Dec 75	1.23	1.91	0.99	0.644
Jan-Mar 76	NA	NA	NA	NA
Apr-Jun 76	1.12	1.25	0.98	0.896
Jul-Sep 76	1.08	1.74	0.90	0.621
Oct-Dec 76	1.12	1.80	1.02	0.622
Jan-Mar 77	1.11	1.82	0.99	0.610
Apr-Jun 77	1.12	1.87	0.90	0.599
Jul-Sep 77	1.11	1.87	0.85	0.594
Oct-Dec 77	1.03	1.95	0.90	0.528
Jan-Mar 78	1.01	1.83	0.83	0.552
Apr-Jun 78	0.95	1.72	0.74	0.552
Jul-Sep 78	0.89	1.73	0.79	0.514
Oct-Dec 78	0.84	1.67	0.78	0.503
Jan-Mar 79	0.84	1.68	0.76	0.500
Apr-Jun 79	0.75	1.55	0.69	0.484
Jul-Sep 79	0.77	1.60	0.74	0.481
Oct-Dec 79	0.71	1.56	0.68	0.455
Jan-Mar 80	0.71	1.53	0.78	0.464
Apr-Jun 80	0.75	1.48	0.74	0.507



TABLE 16  
Revenues, volume, and value of trading on the TSE, 1971-82

	<u>Revenues</u> ( <u>\$000s</u> )	<u>Shares traded</u> ( <u>000s shares</u> )	<u>Value of trading</u> ( <u>\$000s</u> )
1971	226,620	545,768	4,715,695
1972	276,579	635,886	6,258,152
1973	373,473	663,856	6,737,076
1974	342,714	568,249	4,523,564
1975	343,955	469,587	4,089,020
1976	382,860	549,210	5,093,468
1977	385,665	679,822	6,044,753
1978	425,813	984,913	10,362,028
1979	680,033	1,390,775	18,826,340
1980	736,640	2,009,091	29,514,530
1981	978,519	1,510,273	25,094,255
1982	718,093	1,576,709	17,670,332

SOURCES: Revenues for 1971-79 are from Chung (1980); revenues for 1980-82 are from TSE internal files. Volumes and values for 1971-79 are from the TSE historical trading file; volumes and values for 1980-82 are from TSE internal files.

TABLE 17

## Return on capital in Canadian financial sectors

Fiscal year	Securities industry	Chartered banks	Life insurance companies
1971	7.62	20.08	6.15
1972	13.91	22.50	5.94
1973	14.29	18.09	5.27
1974	5.07	18.28	6.09
1975	8.76	22.51	6.33
1976	12.01	20.17	8.67
1977	6.83	19.08	10.93
1978	11.70	20.70	12.80
1979	32.10	-	-

NOTE: Return on capital equals net profit after tax divided by capital.

SOURCE: Chung (1980, Table 8).

TABLE 18

Capital, revenues, and expenses for TSE members, 1972-80 (\$ millions)

	Total capital	Gross revenues	Gross expenses
1972	210.9	373.5	310.1
1973	203.8	342.7	322.9
1974	200.4	344.0	309.2
1975	193.3	382.9	337.7
1976	195.6	385.7	354.2
1977	204.1	425.8	388.5
1978	255.2	680.0	533.5
1979	322.2	831.2	688.7
1980	482.2	1,326.5	1,047.7

SOURCE: TSE (1981, Exhibits 9 and 10).

TABLE 19  
Canadian and U.S. securities industries' concentration levels

	1979	1980
<u>Number of firms</u>		
TSE	74	79
NYSE (firms doing public business)	374	387
<u>Market share of 10 largest firms (%)</u>		
<u>Commissions</u>		
TSE	52.1	53.5
NYSE	39.1	44.1
<u>Gross revenues</u>		
TSE	56.0	57.8
NYSE	48.4	52.8
<u>Capital</u>		
TSE	58.0	57.0
NYSE	46.8	50.1
<u>Market share of 25 largest firms (%)</u>		
<u>Commissions</u>		
TSE	79.3	79.7
NYSE	63.6	64.6
<u>Gross revenues</u>		
TSE	82.2	82.2
NYSE	70.1	72.3
<u>Capital</u>		
TSE	78.6	83.0
NYSE	67.7	68.9

NOTE: On the TSE, 10 members constitute 13 per cent of total membership.  
On the NYSE, 10 members comprise 2.6 per cent of total membership.

SOURCE: TSE (1981, 39).

TABLE 20

Trading completed by TSE members in U.S. and Canada in Canadian-based interlisted issues as a percentage of their total trading in Canadian-based interlisted issues (value basis)

Year	<u>Agency</u>		<u>Principal</u>		<u>Total</u>	
	(\$ millions)	%	(\$ millions)	%	(\$ millions)	%
1975-76						
in U.S.	263.2	12.60	518.9	35.90	782.1	22.13
in Canada	1,826.1	87.40	926.4	64.09	2,752.5	77.87
1977						
in U.S.	480.5	13.30	88.6	38.46	1,369.2	23.11
in Canada	3,132.7	86.70	1,421.8	61.53	4,554.5	76.89
1978						
in U.S.	684.3	10.51	1,507.1	34.96	2,191.4	20.25
in Canada	5,826.3	89.49	2,803.6	65.04	8,629.5	79.75
1979						
in U.S.	1,544.6	12.04	3,763.6	33.48	5,308.1	22.05
in Canada	11,283.6	87.96	7,478.0	66.52	18,761.6	77.95
1980						
in U.S.	2,406.4	13.81	6,369.3	33.67	8,775.9	24.15
in Canada	1,751.3	86.37	1,633.5	67.42	3,384.4	76.06
1981 thru April						
in U.S.	612.1	12.08	1,630.4	31.89	2,242.5	22.03
in Canada	4,454.0	87.92	3,482.5	68.11	7,936.6	77.97
1981						
January						
in U.S.	150.9	15.64	410.9	32.25	561.8	25.09
in Canada	814.1	84.36	863.3	67.75	1,677.4	74.91
February						
in U.S.	125.5	11.81	378.3	32.94	503.8	22.79
in Canada	937.2	88.19	770.2	67.06	1,707.4	77.21
March						
in U.S.	128.0	7.78	382.2	31.50	510.2	17.86
in Canada	1,186.7	85.11	1,018.0	68.92	2,204.8	76.78
April						
in U.S.	207.7	14.89	459.0	31.08	666.7	23.22
in Canada	1,186.7	85.11	1,018.0	68.92	2,204.8	76.78

SOURCE: TSE (1981, Exhibit 11).

TABLE 21

Trading in Canadian-based issues by exchange as a percentage of total trading in those issues, 1969-79

	TSE	NYSE	AMEX
1969	28.4	71.6	
1970	31.9	68.1	
1971	44.7	55.3	
1972	48.6	26.5	24.9
1973	51.7	25.1	23.2
1974	42.1	35.6	22.3
1975	52.4	31.8	15.8
1976	46.9	38.9	14.2
1977	45.0	30.1	24.9
1978	44.1	26.8	29.1
1979 (9 months)	41.1	19.1	39.8

SOURCE: Major Market Trends, Table 3.

TABLE 22

Percentages by broad industry groups of total value of trading in Canadian-based interlisted stocks completed on American markets, 1975-80

	International	Oils	Mines	Industrial	Gold
1975	50%	36%	17%	14%	89%
1976	58	41	19	27	83
1977	60	51	24	26	80
1978	55	54	22	26	85
1979	51	57	31	42	72
1980	62	60	46	46	77

SOURCE: TSE Monitoring Report and Monthly Review.



TABLE 23

Percentage of total value of trading in Canadian-based interlisted stocks on American markets accounted for by broad industry groups, 1975-80

	International	Oils	Mines	Industrial	Gold	Total
1975	66%	12%	3%	16%	4%	100%
1976	68	14	3	11	2	100
1977	50	30	2	12	6	100
1978	34	45	2	11	8	100
1979	28	51	3	14	4	100
1980	32	41	6	13	8	100

SOURCE: TSE Monitoring Report and Monthly Review.

TABLE 24

Trading information for five stock exchanges in 1981

	Toronto	New York	Tokyo	London	Frankfurt
(values in millions of U.S. dollars)					
Listed companies	799	1,570	1,417	3,141	370
Listed issues					
Stocks	1,144	2,228	1,424	2,679	406
Bonds	-	3,057	527	3,222	4,929
Market Value					
Stocks	116,682	1,242,803	379,680	204,548	63,502
Bonds	-	507,770	248,680	214,667	-
Trading value					
Stocks	24,692	382,447	179,754	36,669	5,623
Bonds	-	5,190	20,260	197,010	12,825
Member firms	79	570	83	234	92

SOURCE: Tokyo Stock Exchange, 1982 Fact Book.

TABLE 25  
Volume and value on three North American exchanges

	Volume (millions of shares)			Value (millions of dollars)		
	TSE	NYSE	AMEX	TSE(\$CAN)	NYSE	AMEX
1975	469.6	4,693.4	540.9	4,089.0	130,819.0	5,678.0
1976	649.2	5,360.1	648.3	5,093.5	164,545.0	7,468.0
1977	679.8	5,273.8	653.1	6,044.8	157,250.0	8,532.0
1978	984.9	7,205.1	988.6	10,362.0	210,426.0	15,204.0
1979	1,390.8	8,155.9	1,100.3	18,826.3	251,098.0	20,596.0
1980	2,009.1	11,352.3	1,626.1	29,500.0	397,670.0	34,696.0
1981	1,570.0	12,884.4	1,488.7	25,100.0	415,913.0	26,385.0
1982	1,576.7	18,282.0	1,598.4	17,670.3	514,366.6	20,860.1

SOURCES: NYSE Fact Book, TSE historical trading file, and TSE internal files

TABLE 26  
Relative importance of revenue sources of TSE members and NYSE members

Revenue source	TSE		NYSE	
	1980	1979	1980	1979
	%	%	%	%
Commissions	65.8	62.5	40.7	41.7
Underwriting	16.5	16.4	9.4	8.0
Trading and investment profit	14.2	14.4	26.4	27.8
Other	3.5	7.1	23.5	22.5
Total	100.0	100.0	100.0	100.0

SOURCE: TSE (1981, Appendix A, Exhibit 14).

TABLE 27  
Return on capital (pre-tax)

	TSE members	NYSE members
1972	30.1	18.8
1973	9.7	-1.9
1974	17.4	1.1
1975	23.4	23.1
1976	16.1	25.1
1977	18.3	10.6
1978	49.6	15.6
1979	44.2	22.0
1980	57.8	33.2

SOURCE: TSE (1981, Exhibit 10).

TABLE 28  
Seat prices on the NYSE and TSE maximum and minimum, 1970-80 (\$ thousands)

	NYSE		TSE	
	maximum	minimum	maximum	minimum
1970	320	130	133	115
1971	300	145	95	80
1972	250	150	90	60
1973	190	72	90	87
1974	105	65	NO TRADES	
1975	138	55	39	30
1976	104	40	30	20
1977	95	35	20	15
1978	105	46	20	12
1979	210	82	29	15
1980	275	175	55	26

SOURCE: NYSE Economist's Office and Secretary to the TSE.

TABLE 29  
Selected concentration ratios

Ranked variable	1971	1975	1980
<u>Total revenues</u>			
Top 4 firms	18%	21%	24%
Top 8 firms	25	31	39
Top 16 firms	36	44	54
Top 25 firms	44	53	61
<u>Securities commission income</u>			
Top 4 firms	17	21	24
Top 8 firms	25	31	36
Top 16 firms	35	43	48
Top 25 firms	44	52	56
<u>Underwriting income</u>			
Top 4 firms	15	25	28
Top 8 firms	25	38	41
Top 16 firms	40	56	60
Top 25 firms	52	67	68
<u>Pre-tax income</u>			
Top 4 firms	20	23	24
Top 8 firms	27	32	35
Top 16 firms	36	43	46
Top 25 firms	44	50	52
<u>Equity capital</u>			
Top 4 firms	22	20	20
Top 8 firms	28	28	30
Top 16 firms	37	39	41
Top 25 firms	44	46	49
<u>Assets</u>			
Top 4 firms	27	31	33
Top 8 firms	36	45	50
Top 16 firms	48	61	68
Top 25 firms	56	69	77

SOURCE: SEC (1981, 90).

TABLE 30  
Selected concentration ratios

Ranked variable	1971	1975	1980
<u>Total revenues</u>			
Top 4 firms	18%	21%	24%
Firms 5 - 8	7	10	15
Firms 9 - 16	11	13	15
Firms 17 - 25	8	9	7
All others	56	47	39
<u>Securities commission income</u>			
Top 4 firms	17	21	24
Firms 5 - 8	8	10	12
Firms 9 - 16	10	12	12
Firms 17 - 25	9	9	8
All others	56	48	44
<u>Underwriting income</u>			
Top 4 firms	15	25	28
Firms 5 - 8	10	13	13
Firms 9 - 16	15	18	19
Firms 17 - 25	12	11	8
All others	48	33	32
<u>Pre-tax income</u>			
Top 4 firms	20	23	24
Firms 5 - 8	7	9	11
Firms 9 - 16	9	11	11
Firms 17 - 25	8	7	6
All others	56	50	48
<u>Equity capital</u>			
Top 4 firms	22	20	20
Firms 5 - 8	6	8	10
Firms 9 - 16	9	11	11
Firms 17 - 25	7	7	8
All others	56	54	51
<u>Assets</u>			
Top 4 firms	27	31	33
Firms 5 - 8	9	14	17
Firms 9 - 16	12	16	18
Firms 17 - 25	8	8	8
All others	44	31	23

SOURCE: Derived from Table 29.

TABLE 31  
Selected ratios

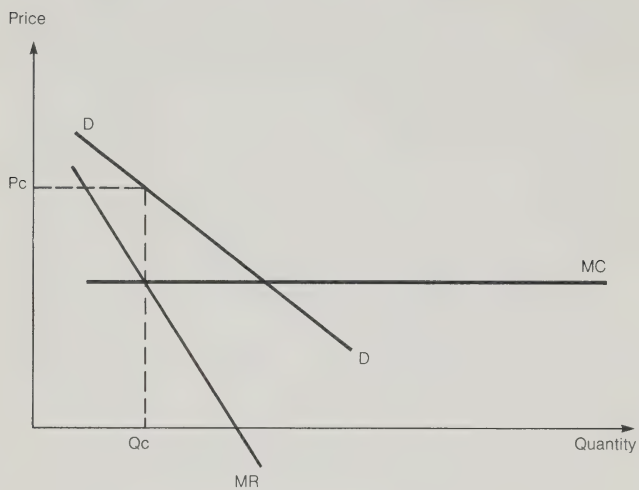
	1971	1975	1980
<u>Share of pre-tax income of total revenue</u>			
Top 4 firms	1.11	1.09	1.00
Firms 5 - 8	1.00	0.90	0.73
Firms 9 - 16	0.82	0.85	0.73
Firms 17 - 25	1.00	0.78	0.86
Top 25	1.00	0.94	0.85
All others	1.00	1.06	1.23
<u>Share of pre-tax income to share of equity capital</u>			
Top 4 firms	0.91	1.15	1.20
Firms 5 - 8	1.17	1.12	1.10
Firms 9 - 16	1.00	1.00	1.00
Firms 17 - 25	1.14	1.00	0.75
Top 25	1.00	1.09	1.06
All others	1.00	0.93	0.94
<u>Share of pre-tax income to share of assets</u>			
Top 4 firms	0.74	0.74	0.72
Firms 5 - 8	0.78	0.64	0.65
Firms 9 - 16	0.75	0.69	0.61
Firms 17 - 25	1.00	0.87	0.67
Top 25	0.79	0.72	0.68
All others	1.27	1.61	2.09

SOURCE: Derived from Tables 29 and 30.



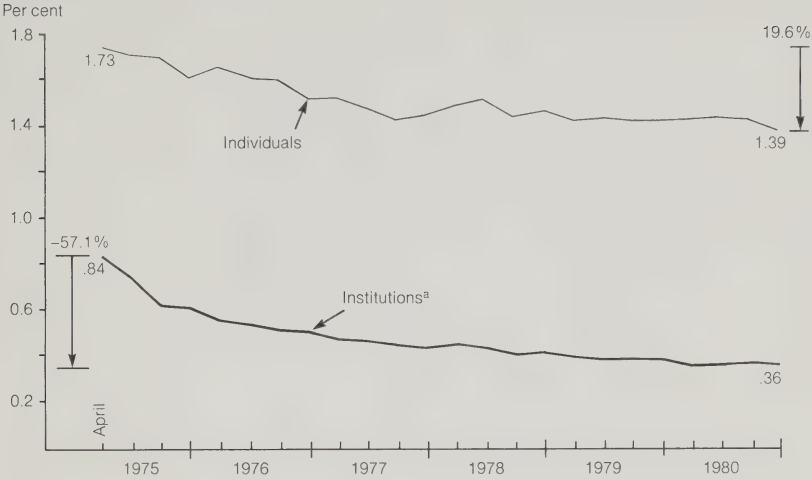
## FIGURES

Figure 1  
Cartel pricing

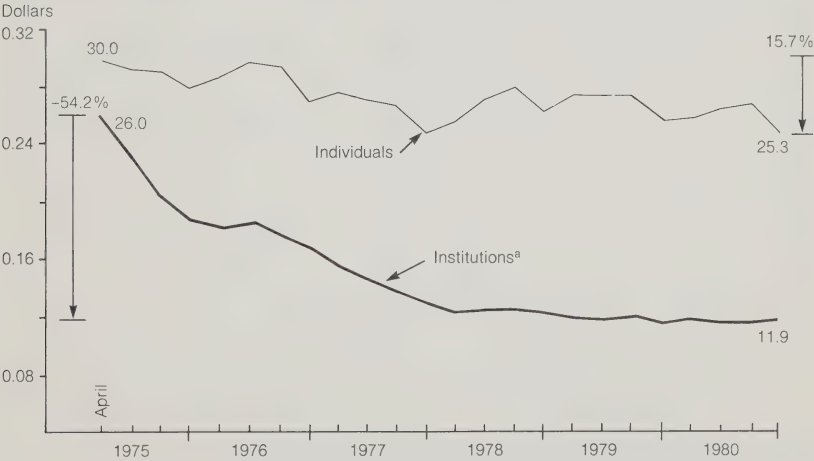


**Figure 2**  
**Effective commission rates — NYSE member firms,**  
**April 1975 through 4th quarter 1980**

Commissions as a percentage of principal value — all trades



**Commission cents per share — all trades**

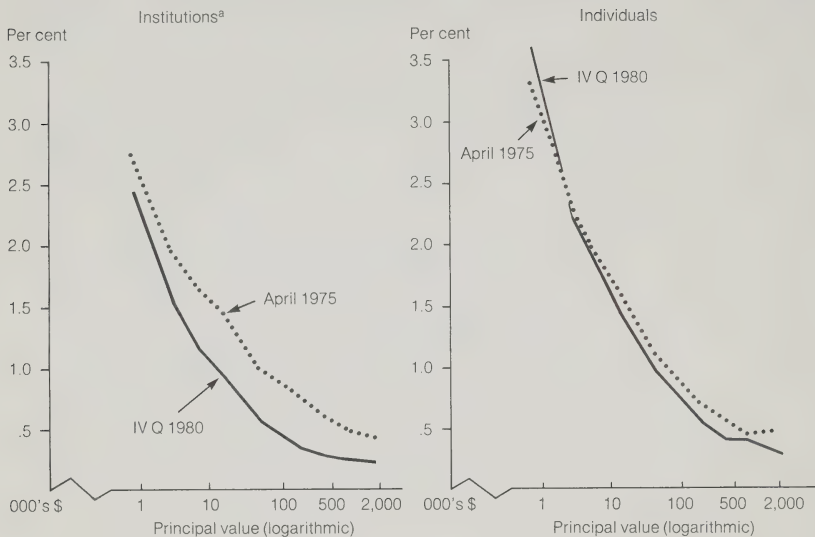


<sup>a</sup>Where institutional and individual customers cannot be precisely identified, COD business is defined as institutional and all other business as individual.

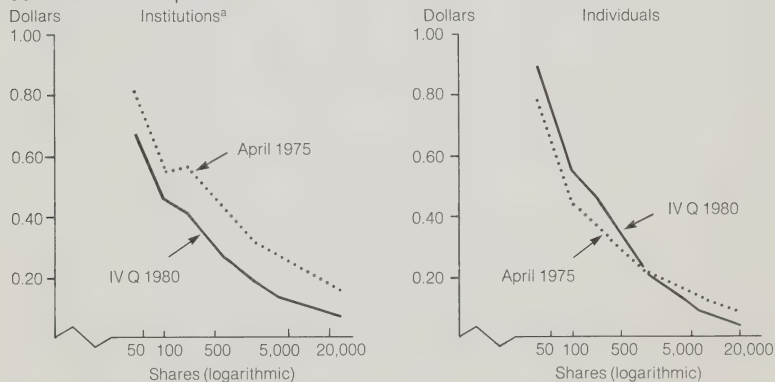
Source: SEC (1981, 94).

**Figure 3**  
**Effective commission rates versus order size,**  
**April 1975 and 4th quarter 1980**

Commissions as a percentage of principal value



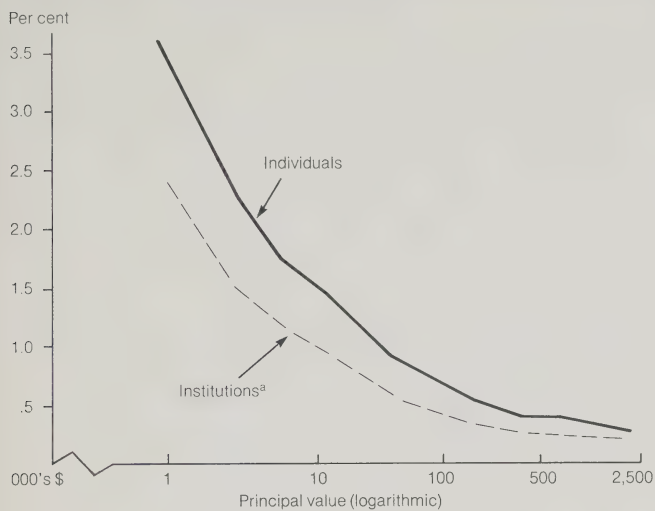
**Commission cents per share**



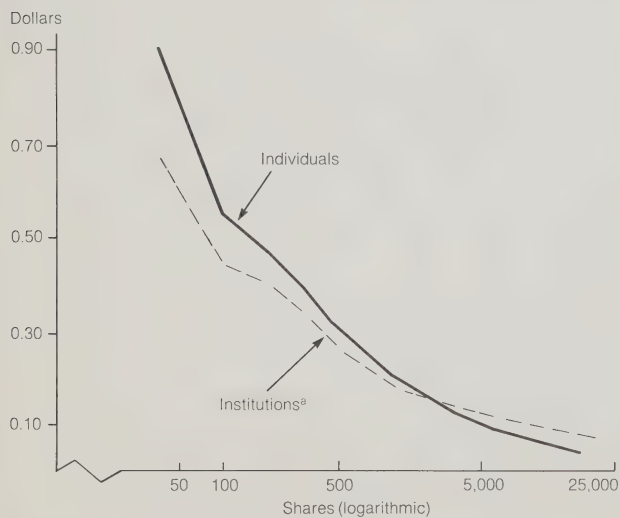
<sup>a</sup>Where institutional and individual customers cannot be precisely identified.  
 COD business is defined as institutional and all other business as individual.

Source: SEC (1981, 95).

**Figure 4**  
**Effective commission rates — individuals versus institutions, 4th quarter 1980**  
 Commissions as a percentage of principal value



**Commission cents per share**



<sup>a</sup>Where institutional and individual customers cannot be precisely identified. COD business is defined as institutional and all other business as individual.

Source: SEC (1981, 96).

**Figure 5**  
Measures of profitability for NYSE member firms  
doing a public business, 1972-80

**Pre-tax profit margin<sup>a</sup>**

Per cent



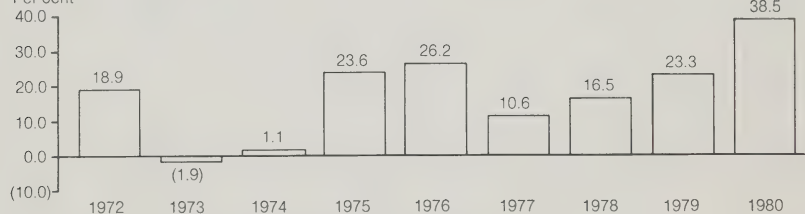
**Pre-tax return on equity<sup>b</sup>**

Per cent



**Pre-tax return on capital<sup>c</sup>**

Per cent



<sup>a</sup>Profit margin is defined as the ratio of income (after partners' compensation but before taxes) to gross revenue.

<sup>b</sup>Return on equity is defined as the ratio of income (after partners' compensation but before taxes) to ownership equity.

<sup>c</sup>Return on capital is defined as the ratio of income (after partners' compensation but before taxes) to total capital.

Total capital is defined as the sum of ownership equity and subordinated borrowings.

Source: SEC (1981, 27).



## CHAPTER 1

- 1 Price competition was introduced simultaneously to the Montreal and Vancouver Stock Exchanges. Since the Toronto, Montreal, and Vancouver Exchanges account for 99 per cent of the total value of Canadian trading (about 95 per cent of volume), fixed prices have effectively been eliminated for the Canadian industry as a whole. The implications of the introduction of competitive rates for the Toronto Stock Exchange presented in this study can thus be generalized for Canada as a whole, except where noted.

## CHAPTER 2

- 1 Other financial institutions, such as banks, normally serve a 'conversion' function. The conversion function consists of offering one type of investment to savers (for example, term deposits) and a different financial instrument to borrowers (for example, demand loans). These financial intermediaries, therefore, convert one type of saving into another type of borrowing. Duration, risk, and other factors may differ between the two instruments.
- 2 These figures do not take into account portfolios managed by the financial institutions. Generally, the discretion of fund managers is very restricted relative to the discretion of top management with respect to the assets of banks, insurance companies, and trust companies. It should be noted that the value of assets of banks, insurance companies, and trust companies does not represent the capital employed by those companies in order to carry on business. A comparison of capital provides a better measure of the relative scale of operations of the different financial industries.
- 3 This difference in equity size was also a major concern in the OSC's institutional ownership hearing held in July 1982.
- 4 Common overhead costs are those that are shared by the different activities and cannot be meaningfully allocated to any particular activity. For example, salesmen may sell the various products jointly; hence, the cost of their office space, telephones, etc. is not related to a particular product. Costs may be allocated, but several alternative methods may be used. The choice of method is arbitrary.

- 5 In some cases, the underwriters do not purchase the securities but serve in only a brokerage capacity. This occurs when the risks associated with resale are too high for the securities firms to be willing to take a principal position and when they are handling certain private sales.
- 6 This section is based on the Canadian Securities Course, Ch. 17. Note that in the US there is the so-called 'third market' in stocks trading on the over-the-counter market (OTC) but listed on the NYSE. This does not exist in Canada.
- 7 Interlisted shares are shares of companies that are listed on two or more stock exchanges.
- 8 The listing requirements of the TSE are given in Section 19.02 of the Toronto Stock Exchange Members Manual:
- 1) The following provisions shall apply to applications for listing from companies whose principal business is mining or the production of oil or natural gas:
    - a) No listing shall be granted except upon the application of the company concerned.
    - b) The entire authorized capital shall be listed, the unissued shares being listed subject to issuance in due course upon notice to the Exchange.
  - 2) The following provisions shall apply to applications for listings from companies other than those whose principal business is mining or the production of oil or natural gas:
    - a) No listing shall be granted except upon application of the company concerned.
    - b) The application for listing shall specifically designate the title and number of shares to be listed. The number to be listed shall be the shares which have been authorized for issuance for a specific purpose. In the latter case, the purpose shall be stated.
    - c) Application shall be made to the Exchange for the listing of any additional shares issued or duly authorized to be issuance or authorization thereof to permit action being taken in due course upon the application.
    - d) The application for the listing of any additional shares which have been duly authorized to be issued for a specific purpose, within a stated period of time, shall give the related terms and conditions, including the period of time which such shares may be issued.
- 9 Floor attorney is a name used by the Toronto Stock Exchange. The same function is served by traders on the Vancouver Stock Exchange and trading representatives on the Montreal Stock Exchange.
- 10 In recent years, as regulation of the industry has tightened, entry restrictions have been introduced for non-exchange activities as well. Hence, fixed rates would now be sustainable for these activities. Since there is no tradition of fixed rates in non-exchange activities, however, there has been no attempt to introduce them. It is highly unlikely that the OSC would condone fixed rates for these other activities.

- 11 Institutions are defined as banks, trust companies, insurance companies, finance companies, corporations, pension funds, mutual funds, and closed-end investment funds. Trading statistics also show intermediary trading - that is, trading completed by TSE members on behalf of another member affiliate or broker. Individuals are traders that are not classified as institutions or intermediaries.
- 12 TSE reports normally classify large-volume individual investors as institutions, since they cannot be differentiated from small institutional investors. As a result, the institutional versus individual breakdown of TSE data can be considered to actually represent large volume versus smaller volume investors. Individual investors are often termed retail clients - as opposed to institutions, to which the industry in effect provides wholesale services.
- 13 A list of the provincial securities acts is provided below.

<u>Province</u>	<u>Title</u>	<u>Date</u>
Alberta	The Securities Act	RSA 1970
British Columbia	Securities Act	SBC 1967
Manitoba	The Securities Act	RSM 1970
New Brunswick	Security Frauds Prevention Act	RSNB 1973
Newfoundland	The Securities Act	RSNfld 1970
Nova Scotia	Securities Act	RSNS 1967
Ontario	The Securities Act, 1978	RSO 1978
Prince Edward Island	Securities Act	RSPEI 1974
Quebec	Securities Act	RSQ 1964
Saskatchewan	The Securities Act, 1967	SS 1967

'RS' stands for 'revised statutes'.

- 14 A look at the TSE's 1981 statement of revenue and expenses (shown below) provides interesting clues to its priorities. Member firms paid over \$9 million in fees in 1981. Expenditures on markets and market development were three times expenditures on member regulation and twice the cost of operations.

# Revenue and expense statement for the Toronto Stock Exchange

	(\$000)	
<u>Revenues</u>		
Member fees	9,375	
Fees from listed companies	6,281	
Income from investments	3,008	
Other <sup>a</sup>	<u>1,139</u>	19,800
<u>Expenses</u>		
Administration	2,185	
Research and special projects	457	
Member regulations	1,685	
Markets and larket development	5,384	
Operations	2,770	
Economics and public affairs	<u>874</u>	
	13,555	
Less extraordinary item	<u>350</u>	13,005
Excess of revenues over expenses		<u>\$ 6,095</u>

a Includes net revenue from CANDAT system.

SOURCE: Toronto Stock Exchange Annual Report, 1981.

- 15 This decision was made following the surcharge hearing that took place on 30 November 1975 (OSC 1975, 278).
- 16 'Soft dollar' services are services not directly related to trading that a broker could offer to investors in return for business (if they were not banned by TSE bylaw). They may be viewed as being equivalent to non-cash rebates and, as such, would have the effect of undermining the fixed rate, if allowed.
- 17 Table 16 shows annual total value of trading for the period 1971 through 1979, and Table 17 shows the profitability of the securities industry relative to other sectors of the financial industry. Profitability has also been strongly affected by factors such as large losses on bond holdings (in 1981) and other occasional investment losses that are unrelated to commission revenues.
- 18 In 1980, the average share price on the TSE was \$14.68 (Canadian), whereas the average share prices on the NYSE and AMEX were \$35.03 (US) and \$21.34 (US), respectively (TSE Historical Trading File and NYSE Fact Book).

- 19 NYSE volume in 1970 was 2.94 billion shares. Going back further, volume was 1.56 billion shares in 1965, 767 million in 1960, 650 million in 1955, and 525 million in 1950.
- 20 Discount brokers offer pure execution (i.e., no research or other services) at a discounted price relative to the full-service firms. The discounters' costs are very low: all they need are have low-overhead offices in which to accommodate the order-takers answering the phones and the backroom operation for completing trades. The number of discount brokers was 90 in 1977, 98 in 1978, 114 in 1979, and 125 in 1980. See SEC staff report, The Securities Industry in 1980.

## CHAPTER 3

- 1 Baxter (1970) provides the text of the original agreement.
- 2 The Ontario Securities Act 1966, c. 142, s. 139. The provisions have been retained through all subsequent revisions of the act and appear in slightly rewritten form in the current Securities Act (RSO 1980 c. 466, s. 22).
- 3 The dissenting commissioners wrote that 'no witness testified that the Canadian securities industry was one that from an economic point of view is suited for rate regulation. Indeed, it is doubtful if a witness with even a nodding acquaintance with the economics of rate regulation could be found to so testify.' (OSC 1974, 312.)
- 4 The text of the decision is reproduced in the appendix to the present volume.
- 5 See Exhibit 13A of the transcript of the 1981 hearing.
- 6 The issue of unfixing brokerage fees has also been hotly debated in Australia and the United Kingdom in recent years. Although the case is not absolutely closed in Australia, the Australian Trade Practices Commission (TPC) issued a Draft Determination and Summary of Reasons in June 1982. It states that:

'The TPC proposed to not grant authorization of rules, etc. relating to fixing brokerage and other charges.' (Paragraph 196.)

The essence of the TPC's reasons is that:

'The TPC analysis...leads to the conclusion that replacing fixed rates with unfixed rates (at all levels) would bring benefits to all investors (including small investors), improve the efficiency of the industry and not affect the continuance of the Exchanges.' (Paragraph 195.)

In the United Kingdom, the Office of Fair Trading is examining the possibility of acting to unfix rates within its jurisdiction.

## CHAPTER 4

- 1 The director made submissions in September 1981 and March 1982.
- 2 These pro-competition arguments are not unique to the securities industry but can be applied to virtually any non-monopolistic market.
- 3 A similar argument can be used to justify 'taxing' all investors to cover the costs of the TSE's market development activities. Recent market development activities include the introduction of options, futures, and commodities trading.
- 4 Table 15 shows that in recent years the average commission rate for institutions as a percentage of principal value has been approximately half the average rate for retail clients (about 0.75 per cent for institutional clients and 1.5 per cent for retail clients).

## CHAPTER 5

- 1 Economic costs include all expenses plus an adequate, or fair, return on investment in the business.
- 2 It is interesting to note that even if both price-cutting and entry are restricted so that the cartel price can be maintained, the potentially high profits are likely to be dissipated unless non-price competition can also be restricted. More will be said about the effects of non-price competition later in this study.
- 3 Although frequently traded securities are often listed on more than one exchange, the high level of cross-membership on Canadian exchanges severely restricts inter-exchange competition. The various Canadian exchanges operate virtually as branches of a single exchange.
- 4 Historically, the companies that controlled the telephone switching network used that monopoly to also monopolistically control terminal equipment; thus, the entire industry evolved into a group of regional monopolies. Recently, however, regulation has opened the terminal market to competition by requiring the telephone companies to allow interconnection.
- 5 Although it is relatively easy to enter the industry (once the registration requirements are satisfied, a new entrant need only purchase a seat on the exchange), no one can do so without becoming a member of the exchange, which involves accepting all of its bylaws.
- 6 Any excess profits earned by members of the exchange will be capitalized into the value of seats. By definition, return on investment is normal if the value of a seat is considered to be part of the broker's investment.
- 7 An order will be fed into a centralized 'trading computer' that will perform the execution and produce all the necessary paperwork without any handling by people.



- 8 See, for example, Doede (1967) and the Quebec Securities Commission submission to the Quebec Securities Commission unfixing hearing.
- 9 Cross-subsidization is sometimes misunderstood, due to the failure to distinguish between the long-run incremental cost of a product and the total cost including allocated overhead.

Virtually any firm or industry that produces more than one product incurs overhead costs than can be allocated only in a purely arbitrary manner. These costs are irrelevant to the production decision for any single product line, although they are important to the overall productivity of the firm. The production decision is properly made purely on the basis of incremental cost.

On this basis, a firm maximizes profit by producing any product that generates revenues exceeding the total additional costs incurred to start or maintain production (i.e., total reduction in costs that could be achieved by discontinuing production).

Consider the following example:

	Product A	Product B	Total Product A & B
Revenue	\$ 25	\$ 10	\$ 35
Incremental costs	20	9	29
Overhead costs	4	4	4
Profit	1	-3	2

- Product A if produced alone is profitable.
- Product B if produced alone is not profitable.
- Producing both product A and product B is more profitable than producing Product A alone.
- Profit is maximized by producing both A and B. Note, however that if both are produced and overhead is allocated as \$2 to A and \$2 to B, product B would appear unprofitable.

This is not a situation of cross-subsidization, since the allocation of overhead is purely arbitrary. Another allocation could show both products as being profitable. More important, the decision to produce product B is independent of the profitability of product A. As long as product A is being produced, B will add \$1 to profit if it is also produced. Incremental costs are only \$9, compared to incremental revenue of \$10.

- 10 Investors choose to invest directly to achieve greater flexibility and increased earning potential. The major cost is the time required to make investment decisions and reduced portfolio diversification. These factors are far more significant than the commission fee differential.

## CHAPTER 6

- 1 As Doede (1967) has demonstrated, it is the business of providing exchange facilities rather than brokerage services that is subject to increasing returns.

- 2 For a detailed discussion of these points, see Baxter (1970, 675-712).
- 3 '...statistical analysis of the commission rate experience since May 1975 supports the hypothesis that the fixed rate schedule underestimated the fixed cost component and overestimated the variable cost component of commission business.' (SEC 1978, 3.)
- 4 Studies that have demonstrated a lack of economies of scale include Friend and Blume (1973) and Mann (1970).
- 5 SEC (1979a). See also Tinic and West (1980) for additional support for this argument.

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